

The Relationships between Women's Satisfaction of their Lower Body Parts and their Overall Weight Satisfaction : A Study of Women in their Twenties to their Fifties

Jung, Hyun-Ju · Jasper, Cynthia R.

Associate Prof., Dept. of Fashion Design, Dongeui University
Prof., Dept. of Consumer Science, University of Wisconsin-Madison

Abstract

The aim of this paper is to provide how to adopt statistical technique like Lisrel, one of the software programs, to secondary data from Lee Yong-Ju(1998).

We develop three research questions and analyze the data of women in their twenties to their fifties simultaneously rather than each age group so that we compare the results of each age group within one model in this study.

At each age group the relationships between the satisfaction of the weight and women's lower body parts regarding waist girth, hip girth and thigh girth are investigated.

The results reveal that women are satisfied with different lower body parts according to the satisfaction of their weight in terms of their age range and imply the satisfaction of their lower body parts by analyzing the satisfaction of their weight does not correspond with increases in their age.

Key words : Women's satisfaction, weight, waist girth, hip girth and thigh girth

I. Introduction

Nowadays, people in Korea are concerned with their health and body appearance due to the improved quality of life, the influence of Western culture, and the effects of globalization. In addition, the improve-ment of nutrition in daily life has resulted in the growth of body size and changed the criteria of body beauty, allowing the slim shape to become the standard of modern

beauty. Women in general are less satisfied with their body appearance and weight than men (Cash and Pruzinsky, 1990).¹⁾ As such, previous research focuses on analyzing primary data collected from various settings of physical and social measurement, such as the comparison of body image between Koreans and Americans (Nam and Lee, 2001),²⁾ and how body image relates to clothing behavior (Kim and Lee, 2001).³⁾

Likewise, previous extensive work and data and the advance of statistical technique help us to get new ideas and perspectives efficiently and effectively. In our work, we have used multivariate analysis. Multivariate analysis refers to categorizing and relating with many variables simultaneously. This provides flexibility of analysis, and allows the data to be analyzed only once, rather than several times. This technique has been used in other research areas such as education, psychology, nursing and management since the 1980's. In the area of clothing and textiles, the field of fashion marketing (Jin and Ko, 1996; Hwang, et al., 2000)⁴⁾⁵⁾ has adopted multivariate analysis. Previously most research has been done using method with new data collection, but the advantage of this technique is also an efficient way to analyze secondary data, provided that it has correlation coefficients and standard deviations.

As such, in the analysis of the body satisfaction, it would be useful to establish some research questions and to compare each age group difference within the model.

In this study we are going to use LISREL, one of the software programs, to implement multivariate analysis.

II. Theoretical background

Several studies have focused on perceptions of body image (Pomper and Koenig, 2004; Poran, 2002; Markey et al, 2002; Patel and Gray, 2001; Jackson, 2000; Barber, 2001; Whitehead and Hoover, 2000; Dione et al, 1995; Koff and Benavage, 1998; Furnham et al,

1998).⁶⁾⁷⁾⁸⁾⁹⁾¹⁰⁾¹¹⁾¹²⁾¹³⁾¹⁴⁾¹⁵⁾ Women are more concerned with their body image and weight than men (Hess-Biber, et al, 1987).¹⁶⁾ Female college students are generally not satisfied with their body cathexis: Mahoney and Finch (1976a)¹⁷⁾ suggest that bust, waist and weight are closely related with self-image, but not with self esteem. When comparing Korean women to American women, Korean women tend to perceive their weight and size as heavier and bigger than it actually is (Nam and Lee, 2001).²⁾ They are also not satisfied with their weight and other body parts of size (Hwang, 1997; Nam and Lee, 2001).¹⁸⁾²⁾ Female college students especially recognized that weight is the most important variable in the satisfaction of their body (Cash, 1989).¹⁹⁾ In the same context, there are various studies, such as understanding body image and eating attitudes, regarding dissatisfaction with body parts associated with weight (Fung and Yuen, 2003),²⁰⁾ the relationship between the satisfaction of weight and clothing attitude concerning weight control (Lee and Im, 2001),²¹⁾ the relationship between women's body image and weight (Parker, et al., 1985)²²⁾ and the relationship between women's weight and ready-made clothes (Hwang, 1997).¹⁸⁾

There are various ways to measure body image or perception. For example, waist, hips, and thighs are considered to have measurement reliability of body size in the lower body parts (Ponage and Benster, 1990).²³⁾ Other research (Kim et al., 2003; Hwang, 1997)²⁴⁾¹⁸⁾ studies the relationship between weight and lower body parts such as waist, hips and thighs. Mahoney and Finch (1976b)²⁵⁾ suggest that after implementing factor analysis for various body

related variables, weight, waist, hips, and thighs are considered as a physical unit and labeled as weight factor in the analysis of body-cathexis.

On the other hand, the most influential factor of changing Korean female body cathexis is considered aging so that the body cathexis in difference ages has presented different types of body factors (Chung and Lee, 1997; Sun, 1989; Lee, et al, 1997; Lee, 1998; Kim, et al, 2003).²⁶⁾²⁷⁾²⁸⁾²⁹⁾²⁴⁾ Even though the age difference is small, adolescents between the ages of 14 and 18 have shown differences in body satisfaction, especially in weight closely related to the hip. The control of middle body parts is considered a factor of attractiveness (Damhorst, et al, 1987).³⁰⁾

Lee's study (1998)²⁹⁾ shows that women in their thirties and fifties reveal higher satisfaction in waist girth and hip girth than women in their twenties. In addition, women in their forties and fifties have the most satisfaction with thigh girth, and next are thirties, then twenties with the least satisfaction. In regards to weight, women in their

fifties show the most satisfaction with it, and next is thirties and forties, with women in their twenties revealing the least satisfaction. However, in her study, the correlation technique didn't reveal causation, and each age group is not analyzed together making it difficult to recognize relative significance of their relations.

As a result, research questions were set up for investigation the satisfaction of lower body parts related to weight from women in their twenties to their fifties as follows:

Research Question 1: If women are satisfied with their weight, will they also be satisfied with their waist girth?

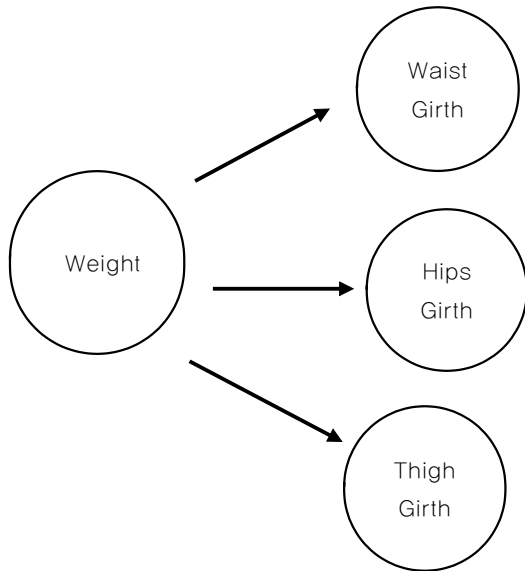
Research Question 2: If women are satisfied with their weight, will they also be satisfied with their hip girth?

Research Question 3: If women are satisfied with their weight, will they also be satisfied with their thigh girth?

<Table 1> Results of Women's Satisfaction of Lower Parts of Body

Path	Twenties			Thirties			Forties			Fifties		
	Standard Estimate	Standard Error	T	Standard Estimate	Standard Error	T	Standard Estimate	Standard Error	T	Standard Estimate	Standard Error	T
Weight → Waist girth	0.47	0.072	6.55**	0.23	0.11	2.16*	0.16	0.072	2.28**	0.33	0.072	4.57**
Weight → Hips girth	0.35	0.061	5.80**	-0.06	0.061	-1.00	0.25	0.061	4.06**	0.12	0.061	1.95
Weight → Thigh girth	0.43	0.061	7.07**	0.066	0.069	0.96	0.11	0.069	1.59	0.26	0.069	3.77**
χ^2 (%)	6.49			35.39			56.14			1.98		
RMR	0.011			0.06			0.052			0.016		
GFI	1.00			0.99			0.98			1.00		

*p<.005, **p<.001



〈Figure 1〉 A Model of Women’s Satisfaction of Lower Parts of Body with Weight

III. Analysis

Generally, LISREL has implemented data from a single sample, but the path diagram can also be used to create syntax for models based on data from several samples simultaneously, according to a multiple-group LISREL model with some or all parameters contained to be equal over groups (Toit & Toit, 2001, p. 188).³¹⁾ We used Lee’s data (Lee, 1998; Lee, et al., 1997),²⁹⁾²⁸⁾ which offered correlation coefficients and standard deviations of weight, waist girth, hip girth, and thigh girth from women in their twenties to their fifties.

IV. Results

The Fitness of the Global Model for the analysis is good enough to accept the total model of the women’s overall age range: Minimum Fit Function χ^2 is 6.07%, $p=0.40$, RMSEA=0.016, NFI=0.99, and NNFI=1.00.

The fitness of women in their twenties models is χ^2 is 6.49%, RMR is 0.011 and GFI is 1.00, which shows good results.

As illustrated in 〈Table 1〉 the more women in their twenties are satisfied with their weight, the more they are satisfied with their waist girth (0.47), thigh girth (0.43), and hip girth (0.35).

Previous research (Lee, 1998; Mclean, 1978)²⁹⁾³²⁾ revealed that women in their twenties perceive the lowest satisfaction in the lower body parts because they compare their body with the modern ideal body, which refers to “a thin ideal” standard of female beauty. As a result, women in their twenties are sensitive in their weight related to their lower body parts.

The fitness of women in their thirties model is χ^2 is 35.39%, RMR is 0.06, and GFI is 0.99.

As women in their thirties are satisfied with their weight, they are satisfied with waist girth (0.23). However, their weight satisfaction contrary to women’s in their twenties does not relate to the satisfaction of thigh girth and hip girth.

The fitness of women in their forties models is χ^2 is 56.14%, RMR is 0.052, and GFI is 0.98.

When women in their forties are satisfied with their weight, they are satisfied with hip girth (0.25) and waist girth (0.16). However, their weight satisfaction does not relate to being satisfied with thigh girth. In this case, contrary to women in their twenties and thirties, women

in their forties are more satisfied with their hip girth than their waist girth.

Lastly, the fitness of women in their fifties model is χ^2 is 1.98%, RMR, 0.016, and GFI, 1.00. When women in their fifties are satisfied with their weight, they are also satisfied with their waist girth (0.33) and thigh girth (0.26), but not satisfied with hip girth.

As Cash (1989)¹⁹⁾ mentioned, weight is an important variable for body satisfaction, and waist girth is perceived as the most important among other body parts. This study confirms that waist is an important variable when all women are satisfied with their weight. Except waist, however, these are not consistent with relationships between the satisfaction of weight and the satisfaction of other parts including the hip girth and thigh girth through all ages.

V. Conclusions and Suggestions

This study is based on secondary data (Lee, 1998; Lee, et al, 1997).²⁹⁾²⁸⁾ Since women are interested in changing their body cathexis, we set up a model for the relationship between the satisfaction of the weight and women's lower body parts, including waist girth, hip girth, and thigh girth.

The results show that according to the satisfaction of their weight in terms of their age range, women are satisfied with different lower body parts, except waist girth. In the case of their twenties, they are very sensitive in their weight and lower body parts. However, their thirties show less sensitivity in the relationship between their weight and their lower body parts except waist girth compared to other age groups.

Also, in their forties with the satisfaction of their weight, the satisfaction of hip girth as much higher than satisfaction of waist girth. The results imply the satisfaction of their lower body parts by analyzing the satisfaction of their weight does not correspond with increases in their age. In addition, previous research suggests that older women tend to be less concerned with their body cathexis. The consideration of their satisfaction of weight, however, reveals different satisfaction with other body parts.

This study adopted a simple model to analyze secondary data. In the future, more complicated models should be applied for analyzing sophisticate models adopting latent variables and factor analysis as well.

References

- 1) Cash, Thomas. and Pruzinsky Thomas. (1990). *Body Image*. NY: Guilford Press.
- 2) Nam, Yun-Ja. and Lee, Seung-Hee. (2001). Perceived Body Size and Actual Body Size between Korean and American College Women. *Journal of Korean Society of Clothing and Textiles*, 25(4), 764-772.
- 3) Kim, Kwang-Kyung, Lee, Keum-Sil and Chung, Mi-Sil (2001). The Effects of Multiple Body Image on Clothing Behavior. *Journal of the Korean Society of Clothing and Textiles*, 25 (2), 358-365.
- 4) Jin, Byong-Ho and Ko, Ae-Ran. (1996). Model of Clothing Brand Loyalty Formation. *Journal of the Korean Society of Clothing and Textiles*, 20(3), 502-580.
- 5) Hwang, Sun-Jin; Hwang, Gyung-Soon; and Lee, Jong-Nam. (2000). The Effect of Service

- Quality on Consumer Satisfaction of Fashion Retail Stores. *Journal of the Korean Society of Clothing and Textiles*, 24(3), 323–334.
- 6) Pomper, Donnalyn and Koenig, Jessica (2004). Cross–Cultural–Generational Perceptions of Ideal Body Image: Hispanic Women and Magazine Standards. *Journalism and Mass Communication Quarterly*, 81(1), 89–107.
 - 7) Poran, Mary A. (2002). Denying Diversity: Perceptions of Beauty and Social Comparison Processes Among Latina, Black, and White Women. *Sex Roles*, 47(1–2), 65–81.
 - 8) Markey, Charlotte ; Tinsley, Barbara J.; Ericksen, Andrea J.; Ozer, Daniel J.; and Markey, Patrick M (2002). Preadolescents’ Perceptions of Females’ Body Size and Shape: Evolutionary and Social Learning Perspectives. *Journal of Youth and Adolescence*, 31(2), 137–146.
 - 9) Patel, Kushal A. and Gray, James J. (2001). Judgment Accuracy in Body Preferences among African Americans. *Sex Roles*, 44(3–4), 227–235.
 - 10) Jackson, Tamara (2000). Eating Disorders: Perceptions of “General Appearance” May be an Influencing Factor. *Obesity, Fitness, & Wellness Week*, Nov. 11 issue, 8–9.
 - 11) Barber, Nigel (2001). Gender Differences in Effects of Mood on Body Image. *Sex Roles*, 44(1–2), 99–108.
 - 12) Whitehead, James R. and Hoover, John H. (2000). The Link between Body Issues and Behavioral Problems. *Reclaiming Children and Youth*, 9(3), 130–132.
 - 13) Dionne, Michelle; Davis, Caroline; Fox, John; Gurevich, Maria (1995). Feminist Ideology as a Predictor of Body dissatisfaction in Women. *Sex Roles*, 33(3–4), 277–287.
 - 14) Koff, Elissa and Benavage, Amy (1998). Breast Size Perceptions and Satisfaction, Body Image, and Psychological Functioning in Caucasian and Asian American College Women. *Sex Roles*, 38 (7–8), 655–673.
 - 15) Furnham, Adrian; Dias, Melanie; McClellan, Alastair (1998). The Role of Body Weight, Waist–to–Hip ration, and Breast Size in Judgments of Female Attractiveness. *Sex Roles*, 39(3–4), 311–326.
 - 16) Hess–Biber, S; Clayton–Matthew, Alan; and Downey, J. (1987). The Differential Importance of Weight and Body Image among College Men and Women. *Genetic, Social, and General Psychology Monographs*, 113 (4), 509–528.
 - 17) Mahoney, E. R and Finch, M. D (1976a). Body Cathexis and Self–esteem: A Reanalysis of the Differential Contribution of Specific Body Aspects. *The Journal of Psychology*, 99, 251–258.
 - 18) Hwang, Jin–Sook, (1997). A Study on the Relationships between Body Satisfaction and Ready–to–Wear. *The Korean Society of Costume*, 34, 183–193.
 - 19) Cash, Thomas. (1989). Body–Image Affect: Gestalt versus Summing the Parts. *Perceptual and Motor Skills*, 69, 17–18.
 - 20) Fung, Mounq. and Yuen, Ming. (2003). Body Image and Eating Attitudes among Adolescent Chinese Girls in Hong Kong. *Perceptual and Motor Skills*, 96, 57–66.
 - 21) Lee, Yong–Ju. and Im, Sook–Ja. (2001). The Relationship between Weight Control Behavior and Satisfaction with Fit of Apparel. *Journal of the Korean Society of Clothing and Textiles*, 25 (1), 13–24.
 - 22) Parker, Simon.; Nicher, Mini; Nichter, Mark; Vuckovic, Nancy; Sims, Colette and Ritenbaugh,

- Cheryl (1985). Body Image and Weight Concerns among African-American and White Adolescent Females: Differences that make a Difference. *The Society for Applied Anthropology*, 54 (2), 103-114.
- 23) Ponage, Peter, Benster, Rosalind and Higgitt, Anna. (1990). Adaptive Prohibit Estimation and Body Size: the Evaluation of a New Psycho-Physical Technique. *The British Psychological Society*, 81, 159-171.
- 24) Kim, Eun-Kyong; Choi, Hei-Sun; and Lee, Kyung-Mi. (2003). A Study on the Actual Wearing Conditions and Fit Preferences of the Middle-aged Women's Ready-to-Wear Lower Body Clothing for Women aged 34 to 59. *Korean Home Economics Association*, 41(3), 1-15.
- 25) Mahoney, E. R. and Finch, M. D. (1976b). The Dimensionality of Body Cathexis. *The Journal of Social Psychology*, 92, 277-279.
- 26) Chung, Myoung-Sok, and Lee, Soon-Won, (1997). Somatotypes and Their Distribution According to Age Groups of Adult Females. *Journal of the Korean Society of Clothing and Textiles*, 21 (3), 571-580.
- 27) Sun, Hee-Soon (1989). *The Study of Korean Middle Age Body Cathexis and Dress Size*, Ph. D. dissertation, Sukmung Women University.
- 28) Lee, Yong-Ju., Park, Ok-Ryun, and Lee, Jung-Ok, (1997). The Recognition and the Somatotype Analysis Study of the Women in 20's Lower Part of the Body for Slacks Pattern. *Journal of the Korean Society of Clothing and Textiles*, 21 (2), 368-382.
- 29) Lee, Yong-Ju. (1998). The Recognition and that Somatotype Analysis of the Women's Lower Part of the Body for Slacks Pattern. *Journal of the Korean Society of Clothing and Textiles*, 22(1), 127-138.
- 30) Damhorst, Mary; Littrell, John; and Littrell, Mary. (1987). Age Difference in Adolescent Body Satisfaction. *The Journal of Psychology*, 121 (6), 553-562.
- 31) Toit, Mathilda du, and Toit, Stephen de. (2001). *Interactive Lisrel: User's Guide*, SSI Scientific Software: International.
- 32) Mclean, F. P. (1978) *The Process of Aging Related to Body Cathexis and to the Clothing Satisfaction with Fit of Apparel*. Unpublished doctoral dissertation, The Utah State University.

Received 1 December 2004, Accepted 9 March 2005.