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Determining the Body Measurements of the Filipino Plus-Size Woman: An Anthropometric Approach

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Ⅰ. Introduction

Clothing for the obese requires clothes that fit well. Obese women have distinct and limiting characteristics that require special attention. In the Philippines, there is a growing plus-size market confronted with fit and style issues. Garment sizes and size measurements are varied and inconsistent. A number of local brands and store labels selling plus-size clothes are not consistent in their sizing, size labels, and specifications.

Due to the absence of anthropometric data for full-figured women this study was undertaken to determine the body measurements that will serve as the basis of size specifications for Filipino plus-size women's apparel. A measurement survey was conducted to plot a representative figure. This was used as a reference for the body measurement specification recommended. Physical measures of height, weight, body dimensions, and weight distribution provide apparel manufacturers, retailers, and consumers the bases for resolving fit and size issues regarding clothes. Traditionally, sizes for locally produced garments have been derived on a trial-and-error basis. It is common practice to use American or other international standards as reference. Such sizing standards are based on the body measurements of people from the country of origin. Thus, these measurements are not applicable to Filipino women who have unique anthropometric characteristics. To date no systematic studies providing the scientific bases for apparel sizing have been documented.

Ⅱ. Results

Most of the body measurements recorded were generally smaller than the measurements of the corresponding circulating stocks at retail stores. The respondents still bought them because they fit, albeit loosely. This indicates the market's preference for loose fit garments. Differences in body measurement references show cause for possible discrepancies and inconsistencies in sizing. Body measurements from the survey indicated that the most common body type is the

pear-shaped, characterized by a narrow top and usually a narrow shouldered torso with round hips or large bulging thighs. The comparison between the body measurements from the existing stocks and the survey measurements identified differences and variations on the following: (a) The figure based on the survey with the figure of the retailer. (b) The differences and variations of the three sizes large-small (1XL), large-medium (2XL), and large-large (3XL) had interval measurements that show differences in applications for the pear and the barrel. (c) Designs and styles bordering on large yardage requirements must be reviewed for the full spread of these large sizes (1XL, 2XL, 3XL). (d) Finally, the surveyed measurements can be a basis as to what clothing details should be appropriate given the measurements and proportions created by the body size and body shape.

The measurement survey was able to derive three sets of measurements: (a) Measurement from the actual measurement survey that plotted the figure with variations, deriving its 1L, 2L, and 3L based on the statistical mean, median, and range. These body measurements is a measurement set from actual subjects in the plus-size category. (b) The Measurement Set as derived from the various suppliers showed the differences amongst various suppliers. They are standardized according to the required measurements given by the retailer and are considered the reference measurements for the circulating stocks. (c) The third set of measurements generated compared the surveyed body measurements with the commercial specifications (retailer's) designated for all of the suppliers. The comparison clearly showed the differences in selected key dimensions and the lack of compliance in majority of the key dimensions.

Ⅲ. Conclusion and Implications

There is a need to test the measurements that have been derived and prepare proto-samples that have measurements of (a) and (c). The (b) measurements are really useful only because they are used in what is sold. This should help us derive a standard set of measurements.

Manufacturers and retailers benefit from the anthropometric data derived because the relationship between changing figures and garments measurements will advance the development of clothing for plus-size women.

This study was able to generate anthropometric data useful for improving fit, comfort, and reliability of the garment sizes thus enhancing the well being of the full-figured Filipina.

Manufacturers and retailers need to refer to a database of body measurements in all apparel categories and size groups. With this information, we can be cost-effective, appropriately styled, and efficient in production requirements. Subsequently, we can be market friendly for the target market. The body dimensions derived from this study should be useful for plus-size garments because deviations in girth and lengthwise measurements show the presence of curvatures attributed to body mass distribution and other correlational measures. The plus-size standard measurements should be established to clearly set directions for sizing and design.

We can prompt legislation to apply to size definitions, labeling, and consumer protection.

Moreover, the greater benefit comes from the need to improve the designs and the make-up (construction) of the garments for the plus-sizes. There is a clear need to strategize on what can be enhancing to the full-figured woman so that we can provide her consistent and reliably sized garments. This means confidence in the manufacturer to ensure use of standard measurements. Clothes for the plus sizes need to be continuously reviewed. The obese and overweight population is a growing market that will constantly require updated anthropometric data.

References

Winn, M. (1990). *Apparel and Accessories*, 2nd ed. New York: McGraw-Hill.

Zangrillo, F. L. (1990). *Fashion Design for the Plus-Size*. New York: Fairchild Publications.

Chun-Yoon, J. and Jasper, C. R. (1993). Garment-sizing systems: An international comparison. *International Journal of Clothing Science Technology* 5(5):28-37.

Chun-Yoon, J. (1996). Key dimensions of women's ready-to-wear apparel: Developing a consumer size-labeling system. *Clothing and Textiles Research Journal* 14(1):89-95.

Goldsberry, E., Shim, S. and Reich, N. (1996). Women 55 years and older: Part I. Current body measurement as contrasted to the PS 42-70 data. *Clothing and Textiles Research Journal* 14(2):108-120.

Chun-Yoon, J. (1996). Women 55 years and older: Part II. Overall satisfaction and dissatisfaction with fit of ready-to-wear, *Clothing and Textiles Research Journal* 14(2):121-132.

Renesson, J. Body Scanning Opportunities for Consumers, Retailers, and Manufacturers. Available from http://www.symcad.com

Salazar, Inquirer News Service 2002. Available at www.inq7.net

Sizing Systems in the Apparel Industry. Annotated Bibliography. Available from http://www.human.cornell.edu/txa/faculty/SizingSystems/all_references.html

Welch, G. and Sowers, M. The interrelationship between body topology and body composition with age among women Journal of Nutrition. 2000; 130:2371-2377. Available from http://www.nutrition.org/cgi/content/abstract/130/9/2371

Workman, J. E. and Lentz E. S. (2000). Measurement specifications for manufacturer's prototype bodies. *Clothing and Textile Research Journal* 18(4):251-259. Available from http://www.itaaonline.org/ITAAnew/CTRJ18d.html