

## Consumer Perceptions of Apparel Fit Satisfaction and Sizing Based Upon 3D Body Scanning and Block Garment Assessment

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### *Clothing, Fit, Sizing*

*Introduction.* Sizing and fit in ready-to-wear apparel causes issues for retailers and consumers alike. Retailers must strive to better understand their consumers' perceptions of themselves in order to help them purchase properly fitting clothing. If a manufacturer is able to improve their sizing system to provide a better fit for more body sizes, they may be able to help reduce returns and markdowns, as well as boost customer satisfaction and potentially increase sales. Due to the advancement in technology, retailers now have the ability to improve fit issues and to develop a more consistent and accurate sizing system (Alexander, Connell, & Presley, 2005; Kasambala, Kempen, & Pandarum, 2014; Pisut & Connell, 2007; Song & Ashdown, 2013). Retailers of apparel must understand their consumers' fit preferences, fit issues, and the diversity of body sizes. Fit is defined as the way in which a garment conforms to the body and how it appears on the body (Kasambala *et al.*, 2014). Currently, there is no national standardized sizing for women's wear, often causing consumers to guess which size they wear between brands and thus, creating confusion (Alexander *et al.*, 2005; Kasambala *et al.*, 2014; Mason, DeKlerk, Sommerville, & Ashdown, 2008; Pisut & Connell, 2007; Song & Ashdown, 2013). In addition, there is a lack of information available to consumers, including specific measurements for each size (Pisut & Connell, 2007). Typical consumers often do not know their true measurements (Alexander *et al.*, 2005; Pisut & Connell, 2007; Song & Ashdown, 2013). Within a particular size category, garment measurements can vary by several inches. Consumers who do not know their true size could potentially be purchasing the incorrect size garment, which likely would not fit correctly, leading them to believe the quality of the clothing is poor (Alexander *et al.*, 2005; Kinley, 2010).

*Statement of the problem.* A major apparel retailer is working on improving the fit of their clothing in order to better meet the needs of their customers. A key objective of this study was to evaluate the fit of the major retailer's standard block garments by assessing customer satisfaction, and to determine how accurately consumers comprehend their body size by utilizing body scanning technology. Consumer perceptions and preferences with regard to this major retailer's clothing are central to the study.

*Objectives.* The objectives of this study were to first determine whether a major retailer's customers are purchasing the correct size garments for their body measurements, and their perceptions of the fit of the retailer's clothing prior to trying on the current block garments. The second objective was to determine which factors influence fit satisfaction after the participants have tried on the current block garments. The block garments consisted of a collared shirt and a

pair of pants. Both are considered a repeat style and therefore, would greatly benefit from the results of this study for correction of errors in fit and satisfaction.

*Method and Results.* The population for this study was female customers of a major apparel retailer. A TC<sup>2</sup>-KX-16 3D Body Scanner and two questionnaires, (a fit satisfaction of block garments and shopping preference) were used to evaluate fit and size. Descriptive statistics, correlations, chi-square, and univariate analysis of variances were utilized to analyze the data and test each of the five hypotheses. Hypothesis 1 tested participants' perceived size and their actual size, Hypothesis 2 tested participants' pre and post try-on fit satisfaction perceptions, and Hypothesis 3, 4, and 5 tested which factors have a significant effect on garment fit satisfaction. There were a total of 55 usable responses (100% female), and all participants were consumers of the major apparel retailer. Sixty-four percent (64.8%) of participants were found to purchase the incorrect size shirts and 50% of participants were found to purchase the incorrect size pants more often than the correct size. Fit satisfaction increased post garment try-on from pre garment try-on. Age, garment type, and size were all statistically significantly influencing factors on fit satisfaction for shirts. Only garment type was found to be a statistically significant influencing factor on fit satisfaction for pants.

*Implications and Limitations.* With the ability to improve consumers' quality perception, sales and consumer satisfaction would also be positively impacted. Age, size, and garment type all significantly impacted the fit satisfaction of the shirts, but only garment type influenced fit satisfaction of the pants. This suggests that further research is needed to determine specifically how these factors influence fit satisfaction. The sample for this study was limited to female consumers of a major apparel retailer located in the mid-southern region of the United States. Participation was voluntary with some hesitation toward 3D body scanning further limiting the sample size. Future research should be conducted to include additional geographical locations.

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