Analysis of the Unisex Sizing System of Current Medical Uniforms:
Understanding User Satisfaction

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Medical doctors' and nurses' jobs are very physically and mentally demanding. The current medical uniform is not designed with their needs and activities in mind; it is standardized to be cheap and sizeless, fitting in a less than optimal way. The medical uniform represents the organization, so if the doctors and nurses are wearing shapeless garments, the message communicated is a lack of professionalism. The garment sizing system should relate to body sizing types with similar body dimensions (Petrova, & Ashdown, 2012), since garment fit plays a significant role in the wearers' satisfaction (Eckman, Damhorst & Kadolph, 1990). There has been little research on fit analysis for the wearer of medical uniforms.

The purpose of this research is to analyze the University of Cincinnati Medical Center's (UCMC) medical uniform wearers' needs and to re-develop the medical uniform, with a focus on diversifying sizing for preferred fit/ fit satisfaction, and also to enhance textile application/usage. If a medical team is outfitted in well-designed, functional uniforms, it suggests a well-run organization where patients can entrust their care to those professionals. Uniforms contribute to the perceived quality of care, and there is a direct correlation to the medical teams' abilities to inspire confidence and professionalism (Morris, Jahangir, & Sethi, 2013).

Research was conducted with UCMC using qualitative interviews (initial survey) and a quantitative questionnaire (main survey) from September 2014 to July 2015. This research examines the overall satisfaction of current medical uniforms. Data was collected with 55 medical staff members initially, and data from 48 (24 males and 24 females) respondents was used for the analysis, eliminating uncompleted questionnaires. SPSS Ver.21.0 was used for data analysis. The descriptive statistics (frequency and percentage) were performed to analyze differences between male and female respondents, as well as sizing system differences between medical uniforms and daily wear. The T-test was performed to compare and to verify fit satisfaction differences between male and female respondents.

The distinguished difference from daily wear garments and medical uniforms was that the medical garments' sizing system had no choice except one "alphabet unisex style", while daily wear garments have several sizing systems which are categorized by alphabet, numeric, and/or inches. The unisex sizing system of current medical uniforms was produced based on the male consumer's body size, resulting in a low satisfaction level with women medical staff members. The wearing ease of the medical uniform was larger than that of daily wear, which leads to discomfort amongst female respondents. 46.7% respondents reported that they have issues due to this reason. Regarding garment fit, the most preferred daily wear outside of the medical

environment was "Regular fit" in both male (25.0%) and female (22.9%), yet this is incongruent with the results of current medical uniforms, revealing that "Loose fit" was the highest response in males (22.9%) and "Regular fit" was highest response in female (25.0%).

Results for preferred fabrics for new medical uniforms showed both male (29.2%) and female (29.2%) respondents prefer the combination of "stretch fabrics + non-stretch fabrics". In regards to overall satisfaction with medical uniforms, males had an overall higher satisfaction level than female respondents; the male respondents averaged a satisfaction level of 3.74 points while females averaged 3.16 points. The satisfaction level of the medical uniforms (scrub shirt, scrub pants, and lab coat) was surveyed for evaluation in specific areas. The results are as follows:

The result of scrub shirt showed statistical meaningful difference with the "waist" and "hem" areas between male and female respondents. The male's average satisfaction level (3.45 points) was above 3.0 points while females' average satisfaction level (2.90 points) was below 3.0 points. For females, most areas (except the chest and bicep areas) were below 3.0 points.

The result of scrub pants showed statistical meaningful differences between male and female respondents in regards to satisfaction level with the "hip", "hem", and "crotch" areas. All male satisfaction evaluation statements (average 3.44 points) were above 3.0 points while all female satisfaction evaluation statements (average 2.71 points) fell below 3.0 points. This result indicates significant consideration and improvement are necessary for the design and fit of female pants.

The result of the lab coat indicated there was a meaningful statistical difference between male and female respondents in regards to satisfaction level with the "armhole area". All male satisfaction evaluation statements (average 3.50 points) were above 3.0 points while the 4 female satisfaction statements (average 2.92 points) were below 3.0 points. It is important to note that the armhole, sleeve areas, and shoulders in the female lab coat received low satisfaction levels.

Current medical uniforms have been developed based on the male figure. Due to this, there were significant needs overall for changing/improving the design of the female medical uniforms. With consideration of manufacturing cost and fit satisfaction, the study suggests specific improvements should be made to female pants design and fit, along with the coat design and fit using new comfortable textiles for better performance of medical staff members.

References

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