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Analysis of fit problems associated with ready-to-wear apparels among female teachers in rural and urban areas in Kogi State, Nigeria

Ibitoye Olushola * and Oluah, B.E.

Department of Home Science and Management, University of Nigeria Nsukka, Nigeria.

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Abstract

Well-fitted ready-to-wear apparel provides reasonable comfort, allows sufficient ease in performing relevant duties, and conforms to current fashion, among others. This study analysed fit problems associated with ready-to-wear apparel among female teachers in rural and urban areas of Kogi State, Nigeria. A multi-stage random sampling technique was used to select 400 female teachers (200 in rural and 200 in urban) from the list of 3,986 secondary school female teachers aged 20-60 years in the study area. Primary data obtained through questionnaire administration to female teachers in active service were analysed using descriptive statistics and mean scores from a Likert-type scale. The results show that most (52.8%) of the female teachers were in the age bracket of 31-40 years. In both rural and urban areas, the most prevalent body shape is characterized by balanced proportions between the bust and hips, while the least common shape is the inverted triangular body shape. The most reported fit problem is at the waist with the majority experiencing tightness at the waist region. This is followed by the hip fit problem, bust fit, neckline, and shoulder fit problems. The least reported problem is the underarm fit problem. The result further shows that female teachers in urban and rural areas relied on the company's size recommendations when making apparel choices. The study recommended that ready-to-wear manufacturers or sellers should ensure clear size labelling, offer a diverse range of styles and sizes, provide customer education, and establish a feedback mechanism to address fit and comfort issues among female teachers.

Keywords: Apparels; Female; Fit-Problems; Ready-To-Wear; Preference.

1. Introduction

Fit plays a crucial role in apparel because it directly affects both the physical comfort of the wearer and the appearance of the clothed body to others. According to Ojha and Sharma (2018), dissatisfaction with fit among consumers can negatively influence their purchasing decisions, as meeting the diverse fit preferences of every individual poses a challenge for apparel companies. Ready-to-wear clothing is typically designed for consumers with standard body proportions and mass production, making it difficult to cater to the specific fit preferences of all consumers. Well-fitted garments are characterized by their comfort, ability to facilitate freedom of movement, adherence to contemporary fashion standards, and absence of wrinkles, sags, or bulges (McRoberts, 2005).

Due to the great importance of fit for consumers when they are choosing clothes, manufacturers invest a lot in sizing systems to ensure the best fit and dimensions. The manufacturers tailor their sizing to match the demographic characteristics of their target consumers. Having the right range of sizes can greatly contribute to a manufacturer's success. To achieve this, companies use advanced technologies and strategies to develop sizing systems and categories, as noted by Doshi (2006).

* Corresponding author: Ibitoye Olushola

Addressing fitting challenges in women's apparel is a significant hurdle for the ready-to-wear industry in Nigeria, as it directly impacts both body comfort and customer satisfaction. Size and fit issues are prevalent concerns among female customers, due to the absence of standardized sizing systems (Gaur *et al.* 2021). Apparel retailers resort to various sizing systems, resulting in inconsistencies across brands and making it difficult for consumers to find their ideal size and fit (Alexander et al., 2005). Moreover, the same size may vary between brands, as each brand employs its unique sizing system, contributing to the widespread occurrence of size and fitting issues in apparel. Consequently, fitting challenges have led to consumer frustration and confusion.

In the study area, some female school teachers wear closely fitting clothing, while others wear oversized clothes. However, some wear clothes that fit well, while others wear clothes which are either too long or too short for their height. According to McCormick, *et al* (2002), most of the personnel in the apparel industry are inadequately skilled to tackle fit issues and seldom employ modern technologies or even utilise dress forms for testing the fit of prototype apparel before even engaging fit models. Available empirical evidence shows that there is little or no existing study on fit problems associated with ready-to-wear apparel among any category of the population in Kogi State. This is in addition to the fact there is no database for styles and sizes of female customers in Kogi State; a situation that may lead to fit problems. Other issues that may lead to fit problems could be consumers' ignorance of their sizes and body shapes, consumers' fit problems, and available styles that do not consider consumers' body shapes, among others. Consequently, this study analysed fit problems associated with ready-to-wear apparel among female teachers in rural and urban areas in Kogi State, Nigeria.

2. Methodology

Descriptive survey design was adopted in this study. The population for the study comprises of 3,986 secondary school female teachers between the ages of 20-60 years living in Kogi State. Taro and Yamane's formula was used to calculate a sample size of 364 respondents. Primary data for the study was obtained from 400 female teachers (200 in rural areas and 200 in urban areas). The selection of the respondents was through a multi-stage sampling procedure. A body measurement guide as suggested by Aldrich (2000) was used to collect data on body measurement. Descriptive statistics and mean scores from a Likert-type scale were used for data analysis. Chi-square was used for testing the hypothesis at $p < 0.05$ level of significance.

2.1. Test of hypothesis

Ho1 There is no relationship between socio-demographic variables and the preferred type of ready-to-wear.

3. Results and discussion

3.1. Socio-demographic data of respondents

Descriptive statistic on the socio-demographic characteristics of the respondents is presented in Table 1. The socio-demographic characteristics analysed in this study include age, marital status, religion, educational qualification and income. The distribution of respondents according to age categories shows that the majority of the respondents were in the age bracket of 31-40 years. The result on the age categories implies that the majority of the respondents were in their youthful and active age. They are therefore likely to be more aware of the dynamics of fashion and more concern about the fit of their apparels. The majority of the respondents were married, while a few number of them were single. A large number of the respondents were Christians. Based on their educational qualification, it can be established that the majority of the female teachers had first degrees. This implies that the teachers have more than the national minimum educational qualification which is the Nigeria Certificate in Education.

Table 1 Socio-demographic variables of the respondents

Demographic variables	Frequency	Percentage
Age(years)		
20-30	112	28
31-40	210	52.8
Above 40	78	19.5
Marital status		

Married	281	70
Single	189	29
Religion		
Christianity	275	68.8
Muslim	125	31.0
Educational qualification		
First degree	378	94.5
Second degree	22	5.5
Income level		
Less than 50k	106	26.5
50k-100k	262	65.5
Above 100k	32	8

Field Survey, 2023.

3.2. Classification of female teachers according to body shapes

The classification of female teachers according to body shape is presented in Table 2. According to Rasband & Liechy, (2006), there are five major body shapes, which are the hourglass shape, rectangular shape, and apple shape. The results show that there is a similarity in the prevalence of body shape among the female teachers from the most prevalent to the least common body shape. In both rural and urban areas, the most prevalent is characterized by balanced proportions between the bust and hips with a narrow waist. The least common shape was the inverted triangular body shape.

Table 2 Classification of respondents according to body shapes

	Rural		**Urban**		**Pooled**	
Shape categories	Freq.	Percentage	Freq.	Percentage	Freq.	Percentage
Hourglass body shape	22	11.00	33	16.50	55	13.75
Rectangle body shape	10	5.00	6	3.00	16	4.00
Apple body shape	20	10.00	21	10.50	41	10.25
Triangular body shape	128	64.00	128	64.00	256	64.00
Inverted triangular shape	20	10.00	12	6.00	32	8.00
Total	200	100.00	200	100.00	400	100.00

Field Survey, 2023.

As observed by Nkamule (2020), the female population consist of individuals with different body shapes and the most prevalent shape within the population is the bust and hips with a narrow waist. In a study carried out by Istook and Hwang, (2001) on female figure identification techniques, the authors found out that in a sample of 220 respondents, the hourglass shape was the most prevalent. In another study by Chen (2018), on an assessment scale for analyzing female figure type, it was reported that among Korean women, there was a higher number of rectangular body shapes Knowing the most prevalent body shape within a population will help inform garment designers and manufacturers on making apparels to accommodate the prevalent shape in the target market.

3.3. Preferred type of ready-to-wear apparels

The distribution of female teachers according to their preferred type of ready-to-wear apparel show that there is little higher preference for locally made apparels than foreign made apparels. Foreign made appeals are usually made with foreign material and designs that suits formal functions, while locally made apparels are made with traditional materials that suit informal functions. This implies that individual preference for type of apparel choice may be dependent on individual preference for either local materials or foreign materials. This finding is unexpected, because according to a study by Udegbe (2023), on consumers' preference for foreign and domestic apparels, foreign apparels have more prestige than locally made apparels due to its relative scarcity and higher price. Furthermore, foreign apparels also

stand for cosmopolitanism. Some consumers prefer foreign apparels because they enhance their self-image as being cosmopolitan, sophisticated and modern. The finding if this study suggests that female teachers may prefer locally-made ready-to-wear apparels because it is cheaper and therefore more affordable for them.

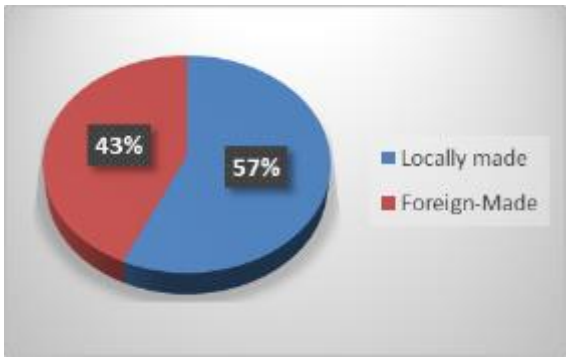

Figure 1 Preferred type of ready-to-wear apparel

3.4. Ready-to-wear apparel fit problems encountered on selected body parts

The result of ready-to-wear apparel fit problems is presented in Table 3. The fit problems were captured under six body parts including the neckline, shoulder, bust, hip, waist, and underarms. The most reported fit problem is at the waist with the majority experiencing tightness at the waist region. The second most reported problem is the hip fit problem, followed by the bust fit problem, then the neckline problem, the shoulder fit problem and the least reported problem is the underarm fit problem.

Table 3 Female teachers on selected body parts

Body parts	Items	Rural, n = 200	Urban, n = 200	Pooled, n =400
		F (%)	F (%)	F (%)
Neckline	Too tight Too loose No fit problem Total	43 (31.50) 4 (2.00) 153 (76.50) 200 (100.00)	49 (24.50) 10 (5.00) 141 (70.5) 200 (100.00)	92 (23.00) 14 (3.500) 294 (73.50) 400 (100.00)
Shoulder	Too tight Too loose No fit problem Total	18 (9.00) 39 (19.50) 143 (71.50) 200 (100.000	4 (2.00) 42 (20.50) 154 (77.00) 200 (100.00)	22 (5.00) 81 (20.00) 297 (75.00) 400 (100.00)
Bust	Too tight Too loose No fit problem Total	88 (44.00) 02 (1.00) 110 (55.00) 200 (100.00)	98 (49.00) 9 (4.50) 93 (46.50) 200 (100.00)	186 (46.50) 11 (2.70) 203 (50.80) 400 (100.00)
Hip	Too tight Too loose No fit problem Total	162 (81.00) 19 (9.50) 19 (9.50 200 (100.00)	131 (65.50) 42 (21.00) 27 (13.50) 200 (100.00)	293 (73.20) 61 (15.30) 46 (11.50) 400 (100.00)
Waist	Too tight Too loose No fit problem Total	179 (89.50) 11 (5.50) 10 (5.00) 200 (100.00)	96 (48.00) 28 (14.00) 76 (38.00) 200 (100.00)	275 (68.70) 39 (9.80) 86 (21.50) 400 (100.00)
Underarm	Too tight	13 (6.50)	10 (5.00)	23 (5.70)

	Too loose	34 (17.00)	62 (31.00)	96 (24.00)
	No fit problem	153 (76.50)	128 (64.00)	281 (70.30)
	Total	200 (100.00)	200 (100.00)	400 (100.00)

Field Survey, 2023.

3.5. Respondents' criteria for apparel selection

The distribution of rural and urban teachers according to their methods of apparel selection is presented in Table 4.

Table 4 Respondents criteria for apparel selection

	Rural		**Urban**		**Pooled**	
Major Method of apparel selection	Freq.	%	Freq.	%	Freq.	%
By wearing it before purchase	23	11.50	28	14.00	51	12.80
I used company size	79	39.50	119	59.50	198	49.50
I depend on seller to choose for me	61	30.50	26	13.00	87	21.70
I depend on family and friends to choose for me	37	18.50	27	13.50	64	16.00
Total	200	100.00	200	100.00	400	**100.00**

Field Survey, 2023.

The various methods employed by respondents when choosing their apparel can be categorized into four groups: "By wearing it before purchase," "I used company size," "I depend on the seller to choose for me," and "I depend on family and friends to choose for me." The identified categories reflect a blend of personal preferences, social influences, and practical considerations. Wearing it before purchase involves physically trying on the clothing before making a purchase decision. This method is used by a minority of respondents and highlights the importance of physical comfort and personal fit in apparel selection. It suggests that these individuals prioritize trying on clothing to ensure it aligns with their specific preferences, perhaps placing importance on factors such as fabric feel, style, and overall comfort. Retailers should consider providing fitting rooms and allowing customers the opportunity to try on clothes, as it caters to this segment of shoppers who value this approach.

A significant proportion of respondents, particularly in urban areas, relied on the company's size recommendations when making apparel choices. The significant preference for relying on the company's size recommendations, particularly among urban respondents, suggests trust in standardized sizing systems and convenience. Consumers who follow this method may feel confident that the company's size chart accurately matches their measurements. A notable portion of respondents, in both rural and urban areas, sought to depend on family and friends when making apparel choices. Recommendations from family and friends likely carry emotional significance and influence the choice of clothing.

Generally, most of the respondents use company-made sizes as a method of apparel selection. The implication of this is that when ready-to-wear manufacturers lack up-to-date anthropometric data that represent their target population, this will result in fit problems. This is in line with Colls (2006), who reported that countries and regions within countries should carry out size surveys from time to time.

3.6. Ways of solving fit problems

Table 4 indicates various suggestions offered by respondents to address fit problems. The provided suggestions offer insights into potential strategies for addressing fit problems associated with ready-to-wear apparel, particularly among female teachers in both rural and urban areas in the study area. Implementing these recommendations will help the apparel industry enhance the fit and satisfaction of its customers. Localizing sizing was one of the key suggestions for solving fit problems. This aligns with Chen & Swalm (2018), who reported that fit models selected for apparel testing should represent the body shape prevalent in the target population. Personal preference should be considered as a way of solving fit problems. This suggestion agrees with the findings by Devarajan & Istook (2004). Findings from the study show that a garment should fit different body parts. For example, some individuals may prefer a tight fit at the hip, while others may prefer a loose fit. Individual fit preference can be achieved by having variations of styles.

Table 5 Ways of solving the fit problems

	Rural			**Urban**			**Pooled**		
Suggestions	MS	Prop.	Decision	MS	Prop.	Decision	MS	Prop.	**Decision**
Body measurements should be taken	2.78	92.50	Agree	2.75	91.50	Agree	2.76	92.00	Agree
Size labels should have clear information	2.53	84.17	Agree	2.53	84.17	Agree	2.53	84.17	Agree
Sizing systems should be localized	2.45	81.67	Agree	2.53	84.33	Agree	2.49	83.00	Agree
Prevalent body shape should be considered	2.33	77.67	Agree	2.35	78.17	Agree	2.34	77.92	Agree
Personal preference should be considered	2.45	81.50	Agree	2.56	85.17	Agree	2.50	83.33	Agree
Side seam allowance for adjustment	2.30	76.50	Agree	2.35	78.33	Agree	2.32	77.42	Agree
Wide range of sizes should be provided	2.53	84.17	Agree	2.55	84.83	Agree	2.54	84.50	Agree

Source: Field Survey, 2023 MS = Mean Score, Prop. = Proportion3.7 Relationship between socio-demographic variables and preferred type of ready-to-wear apparel

Table 6 Relationship between socio-demographic variables and preferred type of ready-to-wear apparel

SN	**Items**	**Locally made F (%)**	**Foreign made F (%)**	**Chi-Square (P-value)**
1	Age (Years)			
	20-30	76 (43.4)	99 (56.6)	25.60 (.000)*
	31-40	74 (61.7)	46 (38.3)	
	Above 40	77 (73.3)	28 (26.7)	
2	Marital Status			
	Married	166(67.8)	79(32.2)	32.71 (.000)*
	Single	60(39.0)	94(61.0)	
	Divorced	1(100)	0(0.0)	
3	Location			
	Urban	114(57.0)	86(43.0)	0.01(.920)
	Rural	113(56.5)	87(43.5)	
4	Religion			
	Christian	151(54.9)	124(45.1)	1.22 (.270)
	Muslim	76(60.8)	49(39.2)	
5	Income			
	Less than 50k	91(42.9)	121(57.1)	2.98 (.225)
	50k-100k	25(46.3)	29(53.7)	
	Above 100k	61(45.5)	73(54.5)	

*, values are significant at $p < 0.05$

The findings on the relationship between socio-demographic variables and preferred type of ready-to-wear apparel show that there was a significant relationship between age and preferred type of ready-to-wear apparel among the respondents. The results reveal that there is a high preference for foreign-made apparel among the younger age group (20-30 years) while a greater proportion of the older respondents preferred locally-made ready-to-wear apparel. This result is in line with a study on the assessment of the influence of age on clothing preference of university students by Okeke (2001). It was stated that people who belong to an age cohort tend to have similar considerations and the preference for apparels. The higher preference for foreign-made apparel among the younger teachers may be attributed to the fact that foreign-made apparels are usually made in line with current fashion trends which appeal more to younger people than older people (Sanad 2016).

Marital status was also associated with the preferred type of ready-to-wear apparels. A larger proportion of single respondents preferred foreign-made apparel, while those who were married preferred locally-made apparels. Marital status is an important variable which can influence the preferred type of ready-to-wear apparels (Nchekube, 2009). In many African societies, many married women prefer clothes that clearly distinguish them from unmarried women. In addition, the single respondents might correspond to the younger respondents previously observed in this study to prefer foreign-made apparels.

There was no significant relationship between location and preferred type of ready-to-wear apparels. They appear to have similar preferences regardless of whether they live in urban or rural areas. Religion was also not significantly associated preferred type of ready-to-wear apparels. Although Muslim respondents showed a slightly higher preference for locally-made apparels, but statistically the difference was not significant. The relationship between income and preferred type of ready-to-wear apparel indicates a p-value > 0.05, which shows that there was no significant relationship between preferred type of ready-to-wear apparel and income of the respondents. This implies that the income level of the respondents did not influence their preference for either locally or foreign-made ready-to-wear apparels. The hypothesis which stated that socio-demographic variables will be significantly associated with the preferred type of ready-to-wear apparels of the respondents was rejected on age and marital status but not rejected regarding location, religion and income.

4. Conclusion

Based on findings from this study, it can be concluded that female teachers in Kogi State, Nigeria were aged between 30-50 years, predominantly married, and held a bachelor's degree. The study classified body shapes among female teachers, with the hourglass and triangular shapes being the most prevalent. Fit problems, particularly at the waist and hip regions, were identified, with tightness being the primary issue. Respondents primarily relied on company size recommendations when selecting apparel. Solutions to fit problems included taking body measurements and localizing sizing systems. The age and marital status of the respondents were associated with the preferred type of respondents. The younger and single respondents showed a higher preference for more trendy apparel indicated by being foreign-made.

The recommendations include:

- The government and relevant stakeholders should conduct regular surveys to collect up-to-date anthropometric data on the target population, particularly among female teachers.
- Apparel manufacturers should implement localized sizing systems based on the collected anthropometric data to tailor apparel to the specific body shapes of female teachers.
- The manufacturers should ensure clear and accurate size labeling on apparel to provide customers with essential information for making informed choices. They should also offer a diverse range of styles and sizes to accommodate different body types and preferences among female teachers.
- Educational institutions and Non-Governmental Organizations (NGOs) should provide customer education initiatives to inform female teachers, especially in rural areas, about proper fit and apparel selection techniques.
- Wholesalers and retailers should implement a feedback mechanism for customers to report fit and comfort issues, allowing for prompt resolution and product improvement.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

Statement of informed consent

Informed consent was obtained from all individual participants included in the study.

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