



Correlating figure types and garment preferences towards sustainable psycho-social and general wellbeing of female undergraduate students of federal universities in South East, Nigeria

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Abstract

The survey study determined relationship between figure types and garment preferences towards psychosocial and general well-being of female undergraduate students of Federal Universities in South East, Nigeria. Study population comprised female undergraduates from five Federal Universities in the study area. About 300 participants selected through purposive and random sampling responded to questionnaire items dealing with respondents' personal data and clothing preference variables. Using anthropometric measurements, subjects' body mass index (BMI) was categorised into underweight, normal, overweight and obese, and further for adiposity, into straight/banana, pear, hour glass/perfect, and apple figure types following body measurement guide (BMG). Clothing preferences were determined based on respondents' frequency of utilization of fabrics with design elements of line, colour, shape, texture; garments' styles, and fits. Data generated were analyzed with descriptive statistics (percentages, mean, and Pearson's product moment correlation coefficient). Significant relationships were established with chi square (X²) using Statistical Package for Service Solutions (SPSS) version 21. Findings include: About 5.3% of the subjects' BMI were underweight, 57.7% were normal, 26.0% were overweight and 11.0% were obese. About 14.3% subjects with normal BMI were found to be in hour glass/perfect figure category. The overweight, obese and underweight subjects possess pear (53.7%), apple (11.0%), and straight/banana (23.7%) figure types respectively. There were no significant relationships ($P > 0.05$) between subjects' figure types and their clothing preferences in fabric design elements of; line ($p = 0.091$), colour ($p = 0.73$), shape ($p = 0.45$), texture ($p = 0.31$), space ($p = 0.10$) and garment styles ($p = 0.35$) and fits ($p = 0.91$) at 0.05 level of significance. Much emphasis should be focussed more on selecting becoming clothes for the figure irrespective of type considering design elements and garment fits rather than focusing on using life destructive figure manipulation and alteration techniques, drugs and devices. Thus, regular orientations on clothing norms for female students especially freshmen on campuses are imminent.

KEYWORDS: FIGURE TYPE, CLOTHING PREFERENCES, DESIGN ELEMENTS, WELL-BEING, FEMALE UNDERGRADUATES

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Introduction

A feature of every being is its shape or form. Human shapes vary depending on sex, muscle and fat distribution which significantly correlate with food habits, sex hormone profile, and activity levels. Figure is a term usually associated with females' body shape or form. The bust, waist, and hips also known as the inflection points and the ratios of their circumferences are used to define basic figure types using anthropometric measurements and following body measurement guide (BMG). Anthropometry is the study of the measurement of the human body in terms of dimensions of bone, muscle, and adiposity or fat deposits.

Female figures have been variously categorized by different authors (Vulker & Cooper, 1987; Olaitan and Mba 1991; Spenser, 1998; Anyakoha & Eluwa, 1999) but those of McCormack, (2005) adopted in this study include; banana/straight, pear, apple and hourglass figures. Apple shaped figures have broader shoulders compared to their narrower hips. They have slim legs/thighs, while the abdomen and chest look larger compared to the rest of the body. Fat is mainly distributed in the abdomen, chest, and face. In banana, straight, or rectangular figure, the waist measurement is less than 9 inches smaller than the hips and bust measurements. Body fat is distributed predominantly in the abdomen, buttocks, chest, and face. This overall fat distribution creates the typical ruler (straight) shape. The hip measurement is greater than the bust measurement in the pear or spoon figure type. The distribution of fat varies with fat tending to deposit first in the buttocks, hips, and thighs. As body fat percentage increases, an increasing proportion of body fat is distributed around the waist and upper abdomen. The women of this body type tend to have a (relatively) larger rear, thicker thighs, and a smaller bosom. The hourglass has the hip and bust almost equal in size with a narrow waist. Body fat distribution tends to be around both the upper and lower body. This figure type enlarges the arms, chest, hips, and rear before other parts, such as the waist and upper abdomen (McCormack, 2005).

Fashion professionals agree that ideal, average or perfect figure has the hip and bust almost equal in size with a difference of 9-11 inches between the waist and bust/ hip thus producing a figure "8", X or "hourglass" shape (Olaitan and Mba, 1991; Igbo and Iloeje, 2015). Thus, the pear, apple, and straight or banana figure types were perceived as not ideal. Worst still, protruding derriere, heavy and extra-large hips, small busts, knock knees and bow legs create more serious problems.

Though what constitutes an ideal or preferred female figure has varied over time and continues to vary among cultures, a preference for a small waist has remained fairly constant throughout history (Khansi, 2007). Females' tiny waists have been perceived as a sign of good health, fertility, social status, physical attractiveness and sexual pleasure, (Singh, 2000; Barford, 2012). In recent times, much emphasis is placed on figure and appearance by young females worldwide, specifically among Nigerian female youths. The quest to appear the most beautiful legend as Miss; State, Nigeria, Africa, World among others during fashion and beauty contests have led many to seek various means of achieving perfect figure. Often, activities ranging from minor to rigorous exercises, assorted Ketogenic and fad diets and other more life risking plastic and cosmetic surgeries, silicone implants and other artificial devices have been adopted either to increase or decrease body parts such as bust, hips, thighs and bottom to correct figure faults or achieve perfect figure to present flattering and attractive looks but without success. Unfortunately, such measures often predispose such individuals not only to psychological problems but health challenges and untimely death. They fail to understand that the secret to a pleasing and attractive appearance lies in the ability to understand self-figure type and to select clothes that flatter or call attention to attractive parts, conceal or camouflage the bad ones through careful consideration of design elements and garment fit.

Design elements are the building blocks used by designers to create good and pleasing designs. Design elements are also important for wearers to create illusions that can reshape the body to achieve beautiful looks by emphasizing, enlarging, and minimizing, concealing or camouflaging figure faults. They include colour, line, shape/form, space and texture. Colour communicates mood. For instance, bright colours (red, orange, yellow, pink) create illusions of warmth and make wearers appear cheerful and also increase the apparent size of figure or objects. Dark colours such as blues and greens are cool and create illusion of calmness, seriousness or mourning (black), and make figure or objects smaller. Line is a thin narrow mark. It influences eye movement to establish shape and form mood. Structural lines in clothing formed by seams, darts, edges or folds in garment form the silhouette and create illusions. Vertical lines go up and down in a fabric or garment, create illusion of tallness or slenderness and make figure appear taller or thinner and so looks better on fat figures. Horizontal lines go across and tend to make objects or figures fatter, wider, bulkier or shorter (Marshal et al, 2000) and so look better on slim or thin figures. Curved lines such as circles and closed lines stop the eyes, add softness and make a person appear shorter and rounded. Texture determines how a fabric feels, looks and moves when it is worn. It can be soft or crisp, smooth or nubby, dull or shiny (Marshal et al, 2000). Soft or clingy fabrics hug the body and emphasize any irregularities while nubby fabrics add dimension and can make one appear larger. Shiny fabrics reflect light and give impression of added size. The form of a garment is its overall shape; natural, tubular, bell and full shapes. The application of form depends on the shape of the human body itself, the external shape or silhouette of the garment and the outline of the figure. A design or figure is beautiful when there is a relationship among these three features (Johnson and Foster, 1990) and one's clothing is able to camouflage figure faults and add graceful look. Space is the area inside and between a garment. Narrow spaces cause the eyes to move side by side along the width of the space. Too much spaces within a garment make the wearer look like a blob with very uninteresting appearance. It is imperative that individuals gain consciousness of particular figure types possessed to appropriately select becoming clothes to conceal or camouflage whatever fault so as to look beautiful, acceptable and attractive irrespective of figure faults. This cannot be achieved without due consideration of design elements in garment selection Kwon (1991), reiterated that clothing and appearance is a way of expressing who one is, and its practices can be used to boost one's self-concept, appearance, behaviours and general wellbeing.

Well-being includes the presence of positive emotions and moods (contentment, happiness), the absence of negative emotions (depression, anxiety) satisfaction with life, fulfilment and positive functioning (Diener, 2000; Frey & Stutzer 2002;). Different aspects of well-being have been identified; physical, economic, social, development and activity, emotional, life satisfaction, domain specific satisfaction and engaging activities and work and psychological well-being (Frey & Stutzer 2002; Keyes, 2002). Studies show that there is a positive correlation between an individual's clothing and appearance which influence greatly his or her psychosocial wellbeing; lifestyle, self-concept and image, likes and dislikes, body, self-esteem, self-expression, personality, body, and mood (Francis, 2011). An individual's clothes should therefore fit properly. Essential for good fit is the correct ease, "the difference between the size of the garment and the size of the wearer" (Huck, Maganga & Kim, 1994). Properly fitted garment makes for comfort and confidence of the wearer. Conversely, improper fitted garments create a problem for the wearer. Too loose clothes appear unattractive, lack quality, often depicting comical and pathetic characters (Marshal, Jackson, Stanley, kefgen and Touchie-specht, 2000) and too tight clothes reveal body contours, hinder proper blood circulation, cause disciplinary problems, are sexually provocative, erotic, and induce sexual harassment and rape.

Various studies have been conducted on the relationship between body image, clothing perceptions and fashion (Shwet and Otieno, 2013; Arooj, 2019; Francis, 2011) using qualitative

ethnographic approaches. Various studies have also been done on effects of design elements on garments (Gbetodeme, Amankwa, & Dzegbloor, 2016; Siaw, Kermeror & Dzramedo. 2014). Such studies failed to address if garment consumers consider such design elements in selecting garments that suit their figure types. This is the focus of the present study.

Purpose of the Study

The main purpose of the study was to determine the relationship between figure types and garment preferences towards the psychosocial and general well-being of female undergraduate students of Federal Universities in South East Zone, Nigeria.

Specifically, the study sought to determine the:

- body mass index (BMI) of female undergraduate students of Federal Universities in South East, Nigeria.
- figure types of female undergraduate students of Federal Universities in South East, Nigeria.
- garment fabric design preferences of female undergraduate students of Federal Universities in South East, Nigeria.
- garment styles and fit preferences of female undergraduate students of Federal Universities in South East, Nigeria.

Research Questions

The following research questions guided the study:

- What are the body mass indexes (BMI) of female undergraduate students of Federal Universities in South East, Nigeria?
- What are the figure types of female undergraduate students of Federal Universities in South East, Nigeria?
- What are the garment fabric design preferences of female undergraduate students of Federal Universities in South East, Nigeria.
- What are the garment styles and fit preferences of female undergraduate students of Federal Universities in South East, Nigeria?

Hypotheses

Two hypotheses guided the study:

HO₁: There are no significant relationships between figure types and fabric design preferences of female undergraduate students of Federal Universities in South East, Nigeria

HO₂: There are no significant relationships between figure types and garment styles and fits preferences of female undergraduate students of Federal Universities in South East, Nigeria

Methodology

The study adopted a cross sectional survey design to carry out the study in Federal University in South East Nigeria. Five Federal Universities are located in each of the five states in the zone. They include, University of Nigeria, Nsukka, Enugu State, Nnamdi Azikiwe university, Awka, Anambra State, Micheal Okpala University of Agriculture, Umudike, Abia State, University of Ndikerionwu, Ebonyi State, Federal Univerersity of Technology, Owerri (FUTO). The study population comprised all the female undergraduate students of the five Universities

from which a sample of 300 participants were selected using purposive and random sampling techniques.

Structured validated questionnaire developed from review of related literature was used for data collection. The questionnaire comprised three sections. Section A elicited personal data characteristics of the respondents. Sections B and C dealt with clothing preferences and anthropometric assessment of their BMI and figure types.

Anthropometry

The anthropometric measurements were carried out to ascertain the height, weight, waist and hip circumference, mid-upper arm circumference and chest/bust circumference. The Subjects were made to stand on a smooth platform without foot wear, feet parallel to each other with arms by the sides and head erect. A non-stretch pliable measuring tape calibrated in centimetre (cm) was used to take the reading to the nearest 0.1cm and converted to metre (m) by dividing by 100. The respondent's weight was obtained using a bathroom scale that was placed on a firm horizontal surface and the respondents standing on the scale without foot wear. They were made to be on light clothes and no heavy jewellerys. Each respondent had to stand erect on the scale with arms on each side (left and right hand) and head erect. The readings were taken to the nearest 0.1kg. The respondents' body mass indexes (BMI) were determined using the formula: BMI = Kilogram per meter square (KG/M²). The waist circumference was taken on the natural waist line with string tied round at one inch above the navel round the waist with the subject standing erect and abdominal muscles relaxed, Tape was held snugly and readings taken to the nearest 0.1cm and recorded. The hip circumference was recorded as the measurement of the greatest point circumference around the hip region (7½ inches down from waistline) with the subject standing erect, feet together, without heavy clothes and empty pocket. The tape was tightened to make close contact with the body but without indenting the soft tissues. The bust circumference was taken on the fullest part of the bust round the back to front. The tape measure was tightened allowing a space of one finger inside and held securely. The reading was taken. The mid upper arm was measured with the hand hanging freely, the tape measure was placed on the left or right upper arm midway between the acromion process (bony tip) of the scapula and the olecranon process (the point of the elbow), reading was taken to the nearest 0.1cm and recorded. After getting the anthropometric measurements, the other body shape measurements were taken using the four major body shapes calculator by calculator.

Data Analysis

Data were analyzed with descriptive statistics using Statistical Package for Service Solution version 22. Chi-square (X^2) was used to test null hypotheses on the relationship between figure types and clothing preferences, and accepted at 0.05 probability level.

Results

Table 1 shows the background data of the subjects. Majority of the subjects (67.7%) were within the ages of 21-25 years. Data on marital status of the subjects showed that 94.7% were single while 5.3% were married. For the ethnic group of the subjects, respondents from Igbo ethnic group had the highest percentage (89.0) while Hausa had the lowest percentage (0.3) respectively. However, 99.3% of the subjects were Christians and 0.7% was Muslims.

Table 1: Background information of the respondents

| Demographic | Factors | Frequency | Percentage |
|----------------|--------------|------------|--------------|
| Age (in years) | 16 - 20 | 58 | 19.3 |
| | 21 - 25 | 203 | 67.7 |
| | 26 - 30 | 35 | 11.7 |
| | 31 - 35 | 3 | 1.0 |
| | 36 and above | 1 | .3 |
| | Total | 300 | 100.0 |
| Marital status | Single | 284 | 94.7 |
| | Married | 16 | 5.3 |
| | Total | 300 | 100 |
| Ethnic group | Igbo | 267 | 89.0 |
| | Hausa | 1 | 0.3 |
| | Yoruba | 10 | 3.3 |
| | Others | 22 | 7.3 |
| | Total | 300 | 100.0 |
| Religion | Christianity | 298 | 99.3 |
| | Islamic | 2 | .7 |
| | Total | 300 | 100.0 |

Research question 1: What are the body mass indexes (BMI) of female undergraduate students of Federal Universities in South East, Nigeria?

Table 2: Body mass index (BMI) of Female Undergraduate Students of Federal Universities in South East Zone, Nigeria $N = 300$

| Body mass index | Bdy wt in Kg/height m^2 | Frequency | Percent |
|-----------------|---------------------------|------------|--------------|
| Underweight | Less than (\leq)18.5 | 16 | 5.3 |
| Normal | Between 18.5 and 24.9 | 173 | 57.7 |
| Overweight | Between 25.0 and 29.9 | 78 | 26.0 |
| Obese | More than (\geq) 30 | 33 | 11.0 |
| Total | | 300 | 100.0 |

The BMI of the subjects on Table 2 showed that those categorized as normal had the highest percentage (57.7%) while others were overweight (26.0%) obese (11.0%) and underweight (5.3%), respectively.

Research question 2: What are the figure types of female undergraduate students of Federal Universities in South East, Nigeria?

Figure 1 shows the different figure types of the subjects. The table shows that majority of the subjects (51.3%) were pear shaped, 23.3% were straight/banana shaped and 14.4% were hourglass shaped. However only (11.0%) of the subjects were apple shaped.

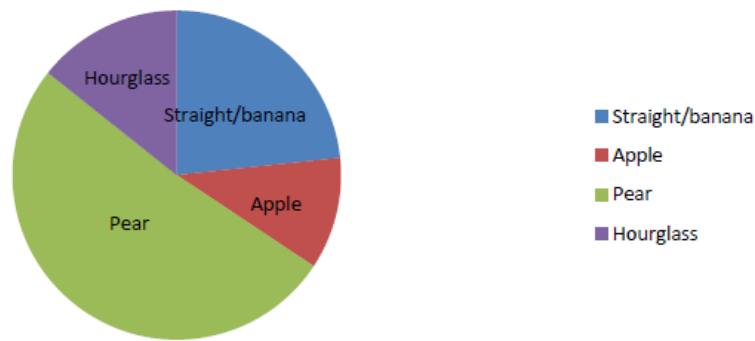
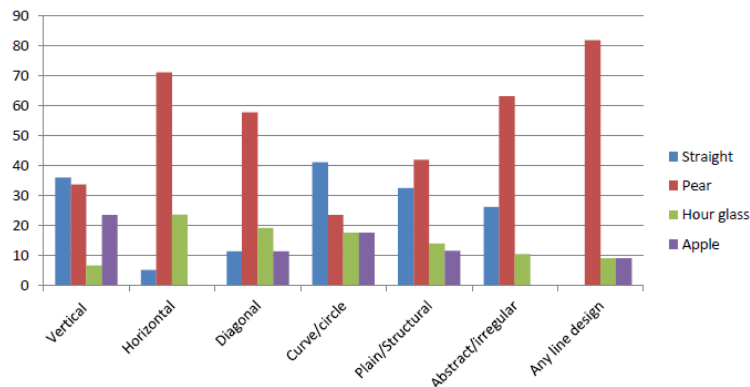


Figure 1: Figure types Female Undergraduate Students of Federal Universities in South East, Nigeria N = 300

Research question 3: What are the fabric design elements preferences of female undergraduate students of Federal Universities in South East, Nigeria. Figures 2, 3, 4, 5 and 6 will answer the research question

Figure 2 shows data on fabric design element of line preferences across the different figure types. It shows that straight or banana figures have the highest preferences for vertical line (36.0%), while the hour glass figures (6.7%) were the least that preferred vertical line garment consumption. The pear figures scored highest on horizontal line (71.1%) and in diagonal (57.7%), plain/structural (41.9%), Abstract or irregular lines (63.2%) as well as in utilizing any line fabric design (81.1%) in garment utilization. Straight figures totally reject any line design (0.0%) indicating they are selective in their choices of lines in fabrics.



Note: Design Elements of Line 1: N = 300 ($\chi^2 = 50.335$ P = 0.091)

Figure 2: Percentage responses on the fabric design element of line preferences and their relationship with figure types of female undergraduate students of Federal Universities in South East Nigeria

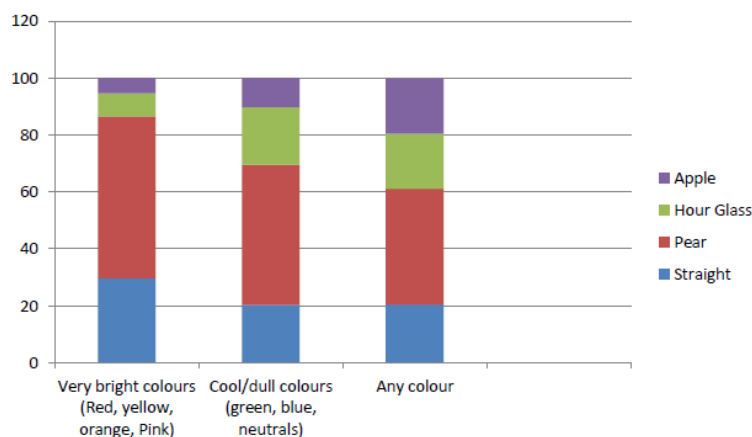
Hypothesis 1: There are no significant relationships between figure types and fabric design preferences of female undergraduate students of Federal Universities in South East, Nigeria.

The χ^2 P-value of 0.091 is greater than 0.05 indicating that the null hypothesis stating that there is no significant relationship ($P > 0.05$) between subjects' figure types and their preferences in fabric design elements of line is accepted at 0.05 level of significance

The data in figure 4 above reveals that tubular shape or silhouette was mostly preferred by pear figures (50.7%) followed by the straight figures (22.9%) while apple figures were rated the least (7.5%). The pear figures also rated highest in preferences for full (52.4%), bell (45.2%) and natural (61.3%) shapes. Within individual figure types, the most preferred shapes include

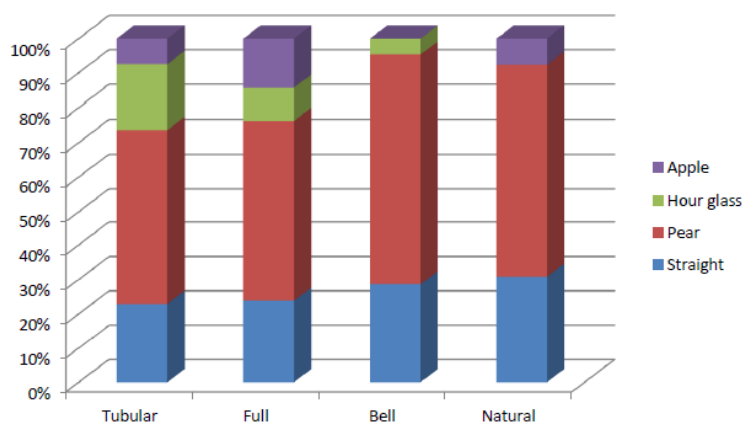
tubular for straight and hour glass (22.9 % and 18.9% respectively) natural for pears (61.5%), and full for apple figures (14.3%),

The P-value of 0.45 is greater than 0.05 indicating that the null hypothesis stating that there is no significant relationship ($P > 0.05$) between subjects' figure types and their preferences in fabric design elements of shape is therefore accepted at 0.05 level of significance.



Note: Element of Colour. $N = 30$, ($X^2 = 12.107$, $P = 0.733$)

Figure 3: Percentage responses on the fabric design element of colour preferences and their relationship with figure types of female undergraduate students of Federal Universities in South East, Nigeria

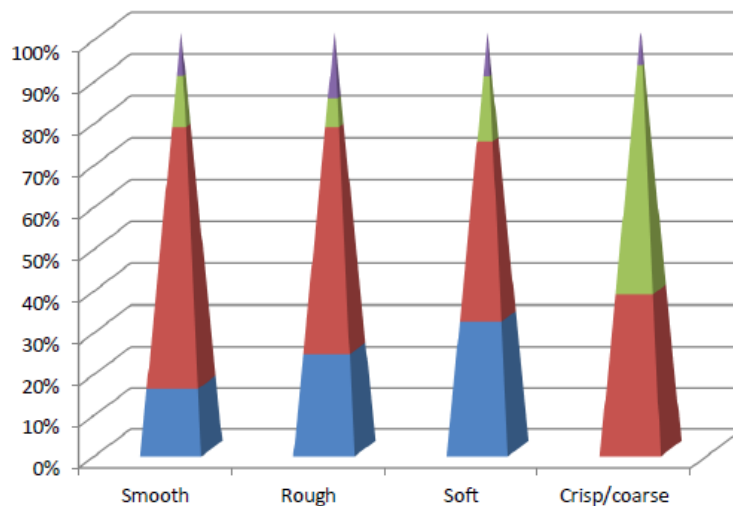


Note: Fabric design elements of Shape/form $N = 300$, $X^2 = 80.424$ $P = 0.45$

Figure 4: Percentage responses on the fabric design element of shape/form preferences and their relationship with figure types of female undergraduate students of Federal Universities in South East Nigeria

In Figure 5, data on fabric texture preferences by different figures show that pear figures scored highest in all the fabric texture variables including smooth (61.5%), rough (53.35%), soft (42.4%) except crisp or coarse (53.8%) texture which was valued most by the hour glass figures. For the specifics, straight figures preferred soft textures (32.0%), Pear figures preferred smooth textures (61.5%), Hour glass preferred crisp or coarse textures (53.8%) while apple figures preferred rough textured fabrics most (15.6%)

The P-value of 0.311 is greater than 0.05 indicating that the null hypothesis stating that there is no significant relationship ($P > 0.05$) between subjects' figure types and their preferences in fabric textures is therefore accepted at 0.05 level of significance.

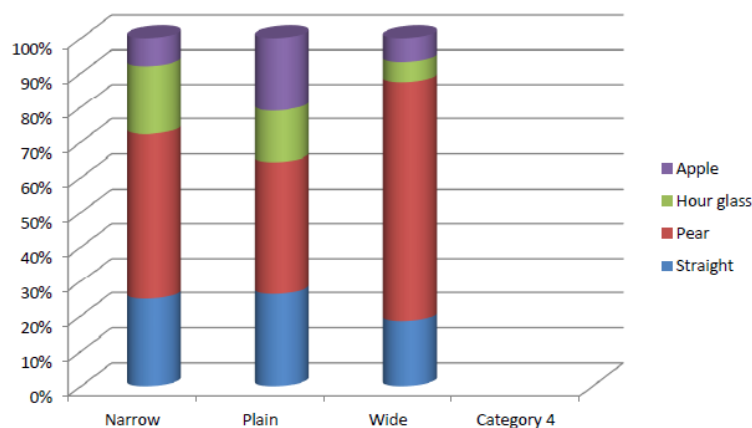


Note: Element of Texture $N = 300$, $X^2 = 11.955$, $P = 0.311$

Figure 5: Percentage responses on the fabric design element of texture preferences and their relationship with figure types of female undergraduate students of Federal Universities in South East Nigeria

Figure 6 shows data on subjects' preferences for design elements of space and their relationships with their figure types. Results show that all the space elements were rated high by the pear figures with wide space scoring highest (69.0%), closely followed by narrow space (47.4%) and last plain space (23.6%). Within the figure types, straight figures value plain designed fabrics most (24.8%), Pear figures preferred wide spaces in garment fabrics (69.0%), hour glass figures treasured narrow spaces (19.7%) while apple figures valued plain spaces most (21.0%).

The P-value of 0.11 is greater than 0.05 indicating that the null hypothesis stating that there is no significant relationship ($P > 0.05$) between subjects' figure types and their preferences for fabric design element of space is therefore accepted at 0.05 level of significance.



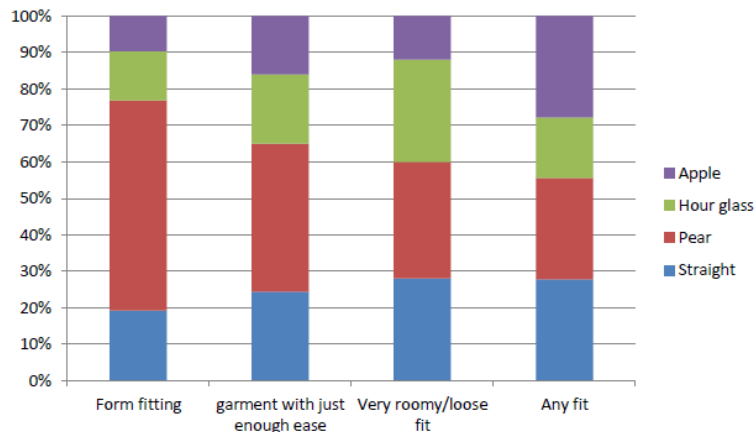
Note: Design Element of Space $N = 300$, $P = 0.11$

Figure 6: Percentage responses on the fabric design element of space preferences and their relationship with figure types of female undergraduate students of Federal Universities in South East, Nigeria

Research question 4: What are the garment styles and fit preferences of female undergraduate students of Federal Universities in South East, Nigeria? Answers to this research question are presented in Figures 7 and 8.

Data on Figure 7 reveals that pear figure subjects scored highest in their preferences for all the garment styles such as clinging or tight garments (57.6%), garments with just enough ease (40.5%). For the individual figures, straight figures valued any fit (40.0%), pear figures was clinging fits (57.6%), hour glass preferred roomy or loose fits while apple figures agreed on garment with just enough ease (16.2%).

The P-value of 0.11 is greater than 0.05 indicating that the null hypothesis stating that there is no significant relationship ($P > 0.05$) between subjects' figure types and their preferences for fabric garment fits is therefore accepted at 0.05 level of significance.

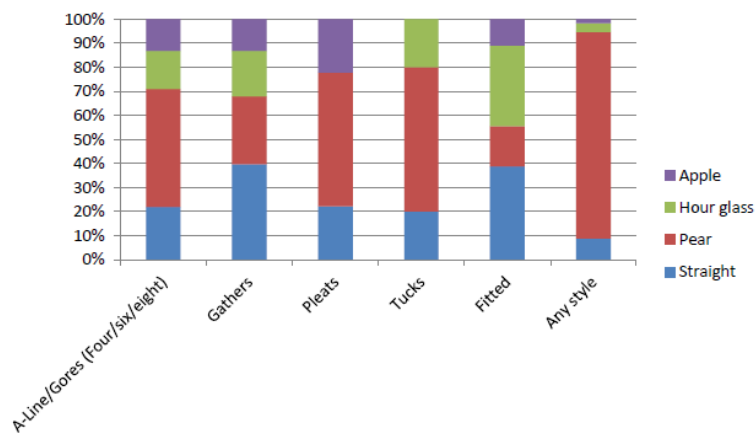


Note Garment Fit $N = 300$, $P = 0.091$

Figure 7: Percentage responses on garment fit preferences and their relationship with figure types of female undergraduate students of Federal Universities in South East Nigeria

Data on Figure 8 above indicate that out of the six garment style options presented, pear figures recorded highest scores in four of them including valuing any style (85.7%), tucks (60.0%), pleats (55.6%), and A-line /four, six or eight gore garments (49.1%). For specific figures, straight figures mostly preferred fitted (38.9%), pear figures value any garment style (85.7%), Hour glass was fitted style (33.3%) and apple figures was pleats (22.2%).

The P-value of 0.35 is greater than 0.05 indicating that the null hypothesis stating no significant relationship ($P > 0.05$) between subjects' figure types and their preferences for garment styles is therefore accepted at 0.05 level of significance.



Note Garment style preferences: $N = 300$, $X^2 = 53.982$, $P = 0.346$

Figure 8: Percentage responses on the garment style preferences and their relationship with figure types of female undergraduate students of Federal Universities in South East Nigeria.

Discussion of findings

The demographic data showed that majority of the subjects (67.7%) were within 21-25 years age bracket, 94.7% were single while 5.3% were married. For ethnic backgrounds, 89.0% were from Igbo, 3.3% were from Yoruba, 0.3% were from Hausa and 7.3% were from other ethnic background. However, 99.3% of the subjects were Christians and 0.7% was Muslims. The personal data showed that the female undergraduates studied were in their late adolescent/early adult years described as age of active conformity to dress pattern of the peers' group, celebrities or other influential personalities encountered.

Majority of the subjects' BMI were normal (57.7%), and few at both negative ends. While 5.3% were underweight, 11.0% were obese. The findings on the subjects' figure types revealed that 14.3% possess hour glass, perfect or ideal figure. This finding is a very good news to the subjects contrary to the speculations by Shweta, & Otieno (2013), and Kim, Sharon & Nancy (2014) that having an ideal or perfect figure is illusionary. Having a perfect figure is a huge asset as fashion professionals agree that an individual with perfect figure does not encounter much difficulty in both fabrics and garment selection as virtually everything fits. More than half of the subjects possess pear figure (51.3%) followed by straight or banana figures (23.3%). This finding has implications to clothing choices. The pear and apple figures recording highest scores on horizontal lines (71.1%), abstract (63.2%) as well as any line fabric (81.1%) indicates ignorance and lack of skill in selecting becoming clothes that camouflage figure faults as documented by Tootal Sewing Product, (1987), and Vulker and Cooper (1987). Horizontal lines fabric makes pear and apple figures look shorter, more rounded and disgusting (Marshal et al, 2000). Fashion professionals agree that the link between style and mood or emotional states is stronger than imagined. Thus, wrong choice could be a predisposing factor to seeking for alternatives (which could be destructive to health and wellbeing) to boost figure. The rejected vertical line fabric garments would have created illusions of slenderness and tallness to make the pear and apple figures look more beautiful and attractive. Pine in Forbes-Bill (2020), reiterated that the more individuals care about encloded cognition and how it can lift a person's mood, the less anti-depressant medication will be needed. The theory of encloded cognition states that clothes influence the wearer's psychological processes based on two variables; the meaning created for particular clothing and the concrete somatic sense that wearing clothing has (Smith, 2017). The null hypothesis stating that there was no significant relationship ($P > 0.05$) between subjects' figure types and their preferences in fabric design elements of line is accepted at 0.05 level of significance.

The pear figures rated highest in all colour parameters (very bright colours such as red, yellow, orange and pink 56.8%). Very bright colours are wrong choices for pear figures especially at the hip, and derriere region as their illusion enlarges. Darker, cool or dull colour contrast would give better camouflage to de-emphasize the flaw and flatter the figure as suggested by Vulcar and Cooper (1987), Igbo and Iloeje, (2015), The apple figures rated highly on cool colours, a better choice to conceal the top-heavy figure.

On design element of texture, pear figures scored highest in all the variables including smooth (61.5%), rough (53.35%), soft (42.4%) except crisp or coarse (53.8%) texture which was valued most by the hour glass figures. Soft or clingy fabrics hug the body and emphasize any irregularities while nubby fabrics add dimension and can make one appear larger (Marshal et al, 2000). For the hour glass choice of crisp texture, they have coveted figures with nothing to hide or compensate for. They can therefore wear any garment fabric of any texture and it looks good on them.

All the space elements were rated highly by the pear figures with wide space scoring highest (69.0%). Within the figure types, straight figures value plain designed fabrics most (24.8%), Pear figures preferred wide spaces in garment fabrics (69.0%), hour glass figures treasured narrow

spaces (19.7%) while apple figures valued plain spaces most (21.0%). This finding is contrary to suggestions by Marshal et al (2000), on becoming elements of space on different figures. Bold spaces on fabrics when worn by pear or apple figures make the figure size bigger but looks better on straight thin and perfect figures.

On design element of shape/form, garment style and fit follow the same trend. There were no consistencies in the right choice of design elements in garment selection and consumption. There were high preferences for form/tight fitting garments by both pear and straight figures. Form/tight fitting garments are the current trend of fashion among females in the study area. This is confirmed by the finding of the present study. Form fitting is contour revealing garments that present unbecoming and unattractive appearance for pear, straight and apple figures. Pear figure subjects scored highest in their preferences for clinging or tight garments (57.6%), garments with just enough ease (40.5%), and garment with roomy fits (32.0). For the individual figures, straight figures valued any fit (40.0%), pear figures was clinging fits (57.6%), hour glass preferred roomy or loose fits while apple figures agreed on garment with just enough ease (16.2%).

Generally, the findings reveal that the pear, apple and straight figures make wrong garment choices contrary to recommendations for garment designs that complement different figure types by Robertson (2008), Tootal Sewing Products (1984), Vulker and Cooper, (1987), Marshal et al (2000) and Kefgen and Spect in Anikweze (2013).

Conclusion

The present study correlated figure types and clothing preferences of female undergraduate students of Federal Universities of South East, Nigeria. Specifically, the study categorised the female undergraduates into four major figure types namely pear shape (51.3%), straight/banana (23.3%), hour glass/average/figure eight (14.4%) and apple figure (11.0%). Null hypotheses tested showed no significant relationships between subjects' figure types and their garment preferences. It was established that the subjects lack appropriate skills in the choice of recommended clothes for their different figure types considering the design elements, garment fit and styles. This could predispose them to clothing related problems. These findings have much implication to the undergraduate students, their parents, the universities as well as their beholders.

Recommendations

Based on the findings of the study, the following recommendations were made:

- Basic clothing education especially on effective apparel selection practices should form part of freshmen orientation programmes on campuses. The orientation programmes should be given by professionals in clothing and textile discipline.
- Occasional seminars, quizzes and competitions should be organised for the students both males and females to inculcate in them desirable clothing norms and the need to always select clothing articles that best suit figure type.
- Students should be educated on their figures and the factors that promote good figures such as adequate diet, exercises and good lives. They should be taught that looking good does not only depend on having perfect figure but also ability to apply design elements and principles to camouflage, conceal bad points and emphasize good ones.

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