



CONSUMER'S BUYING BEHAVIOR ON COTTON CLOTHING BETWEEN THE AGE GROUP 18-24

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ABSTRACT

Purpose- The Garment industry plays a vital role in the Bangladeshi economy and contributes to its export earnings. The present study has focused on primary factors of buying behavior of undergraduate students between the age group of 18-24 during the purchase of their cotton apparel. Therefore, the purpose of this study is to undertake the cotton cloth buying behavior among university students and investigate the independent predictors for their preference for such cloth.

Methodology- For identifying the independent factors, primary data was collected from 200 consumers through questionnaires across various departments of Chittagong University of Science and Technology, Chattogram, Bangladesh. The random sampling method was used for selecting the respondent. The University students who are in the age group of 18 to 24 have been selected for surveying. It is a cross-sectional study conducted among 200 students in which 65% are male and 35% are female participants. The data have been organized into four sections: clothing selection, understanding cotton, fiber composition in apparel, and marketing influences. The participants were asked to rate their responses in terms of agreement or disagreement as follows: strongly agree – 5, agree – 4, neutral – 3, disagree – 2, and strongly disagree – 1. The data has been analyzed with the help of statistical tools like percentage analysis, Z test, and Chi-square analysis.

Findings- At a 5% level of significance, it is seen that price (4.31) is the most important factor for the purchasing behavior of cotton cloths, followed by comfort (4.22) of the cotton fabric, type of fiber (4.10), manufacturers' websites (3.89), manufacturers' Facebook (3.84), fiber Awareness (3.71), Brand names (3.70), Prefer of cotton cloth (3.64), and Magazine advertisements (3.54) are important factors on consumers purchasing behavior but Television advertisements (3.36), Radio advertisements (3.32), Durability (3.31), Internet advertisements (3.20), Influences of friends wear (3.10), and Facebook and Twitter (2.83) are less important factors.

Conclusion- This study has focused on the knowledge regarding cotton cloth, habits, and buying behavior among University students. It is observed that male and female consumers have no significant difference regarding fiber awareness, brand names, price, comfort, affordable, versatility, internet advertisement, magazine advertisement, Facebook and Twitter advertisement, and manufacturers' websites, etc. during purchasing of cotton cloth but there is a significant relationship between male and female consumers about the type of fiber, and friends wear.

Keywords: Consumer preference, cotton clothing, buying behavior, chi-square test, university students, apparel Industry.

JEL Codes: C10, C12, C13, C19

1. INTRODUCTION

Bangladesh is a developing country and it has a large population. More than 23% of the population is between 15-29, and it is well known that younger people are more intrigued by trends than older people. Consumer behavior is the process a consumer uses to decide what to buy. Consumer attitudes toward products and services are always evolving. Generational behavior and buying patterns have been analyzed because it is the largest demographic group in Bangladesh. Apparel is a product category that reflects a consumer's personality traits. Apparel buying behavior is comprised of several determinants that are attributes of the product or brand that determine which product or brand the consumer will buy. Plenty of research works related to various aspects of buying behavior, consumer preferences, brands, and determinants of fashion apparel have been published at home and abroad. However, the present work has been reviewed by some of the previously published works. Retailers of garment bazaars in the National Capital Region (NCR) in the Philippines take into account the attitudes of consumers as well as their subjective norms, perceptions of control, and intentions to make purchases (Adan and Ramos, 2023). Hasan et al. (2021)

analyzed the purchase behaviors of the consumers of organic cotton clothing which lie at the top and bottom of the apparel supply chain. It is observed that a strong positive attitude is formed in the context of Bangladeshi consumers whereas fewer relationships were found to have in American consumers. Koca and Koc (2016) studied the sustainable attributes of clothing selection among older generations. It is noticed that males and older generations need to pay more attention to the connection between excellent clothing and sustainability (Barrera and Villarreal, 2022). To ascertain the distinctions between male and female consumer clothes purchase behavior, Maran et al. (2017) conducted research on the extent to which gender influences the purchasing behavior of customers buying fashion goods. It is observed that male and female consumers were discovered to have varied opinions of fashion and brand awareness in their purchase behavior. Maria and Justin (2019) studied the effect of color psychology on consumer buying behavior in the apparel market. According to the study, selecting a hue that is connected to something negative may adversely affect customers' retrieval cues and deter them from buying the good or service. Rathwa et al. (2021) discussed the consumer buying behavior and socio-economic characteristics of consumers who prefer branded apparel. Meeran and Ranjitham (2016) looked at how consumers felt about branded clothing. It has been noted that the top three brands of clothing that respondents continue to favor are Raymond, Peter England, and John Player. Marina et al. (2019) studied how perceived quality and emotional worth affect buying patterns for branded clothing in India. In the city of Coimbatore, India, Mythil (2020) studied the relationship between the variables that influence consumers' purchasing decisions for branded clothing. Consumer behavior for clothing is influenced by characteristics like monthly income, gender, and peer pressure, according to Deepali Saluja (2016). The study demonstrates that factors such as age, gender, education level, and occupation have little bearing on customers' purchasing decisions. Lakshminarayana and Sreenivas (2018) studied consumer buying behavior toward branded Apparel in Karnataka to examine the socioeconomic traits of customers who favor branded clothes and to learn the factors that encourage consumers to buy branded apparel. Khare and Varshneya (2017) studied the purchase behaviors of organic cotton clothing among Indian youth consumers by considering past peer influence, eco-friendly behavior, and knowledge of organic clothing. The results of the study indicate that consumers' prior environmental responsibility plays a significant effect in their decision to buy green clothing, however, peer pressure and consumer knowledge of green clothing had no bearing on their decision to buy organic clothing. The product attribute has no significant effect on consumer purchase behavior but product pricing, social factors, and brand image significantly influence consumer purchase intention (Rai et al., 2023). Independent factors such as price, product experience, customer service, spiritual value, and emotional commitment are directly related to the shopping decisions of consumers (Tien, 2023). Purchase intention and Electronic word-of-mouth are positively correlated with sustainability perception (Satir T. U., 2023). Vietnamese customers' perceptions of product origin and purchasing intentions toward Chinese items are affected by consumer ethnocentrism and general national image (Nguyen et al., 2023). The purchase intention of a smartphone is significantly affected by personal factors but social factors have no significant impact (Rakib et al., 2022). After all, this generation has a higher disposable income than other groups of the same age because many of them still live with their parents. This generation is price-conscious, fashionable, and aware of a brand's status and prefers shopping. This generation lives their lives through the internet and is not only tech-savvy but used to fast communication. When consumers choose what clothing to purchase, they are significantly impacted by the information provided to them by fashion, branding, and marketing efforts as well as by a variety of personal, psychological, and social elements. Price, brand, quality, aesthetic value, and usability are other values that manifest themselves as influencing attributes. Differences in people's shopping habits are a result of how important these values are and how high they rank on their priority list. Consumer behavior is crucial for manufacturers and retailers to create and use key marketing competencies to survive in the fashion industry. Clothing purchase behavior influencing factors of consumers can be categorized as personal, psychological, and cultural. Among these factors, personal factors are the most important factors for consumers' buying behavior. According to gender classification, individuals can create different clothing choices that depend on their psychological makeup and society's values. Therefore, characteristics such as social, physical, economic, and Psychological can affect clothing purchase behavior at different ages.

In our society clothes have a special status in our life. It would not be wrong to say that today's youth buying behavior is greatly influenced by factors such as social, cultural, personal, psychological, fashion, T.V. advertisements, etc. Advances in media, education, and technology have a variety of fabrics and apparel for today's consumers to choose from. Therefore, the present study is important for clothing purchasing behavior in the garment sector. These are the motivations behind the present work. The main goal is to find the influencing factor and the prominent impacting role on the consumer's buying behavior to buy cotton clothes.

The apparel and garments industry has the top place in Bangladesh as a result apparel intension and outfits among the customers are getting inflated. Hence it is very important to study the changing behavior of consumers. Therefore, the main aim of this study is to analyze the apparel buying behavior of Bangladeshi University consumers and it is assumed that apparel buying behavior provides actionable information to garment industries to adjust their arrangements for Bangladeshi

consumers. The statistical analysis has been done based on four statements such as understanding the fiber content in clothing, clothing choice factors, knowledge of cotton in clothes, and influences of marketing on purchases.

2. METHODOLOGY

To assess the pertinent data based on an empirical result, a qualitative approach to survey research was chosen. Particular questionnaires make up the survey. Participants were questioned about their preferences for cotton apparel purchases and how they affected those choices. The convenient probability sampling technique has been utilized to collect data for the current investigation. The sample size is taken in the following way:

$$SS = \frac{Z_{\alpha}^2 P(1-P)}{\alpha}$$
, where SS = sample size, $Z_{\alpha} = 1.96$ is the critical value at a 5% level of significance, P = population percentage, and $\alpha = 0.05$, level of significance. Therefore, according to the above formula, the required sample size for the present study would be = $\frac{(1.96)^2 0.6 \times 0.4}{(0.05)^2} = 368.79$. It is observed that 369 is the maximum sample size for the present study.

There are 43 public universities in Bangladesh. From these universities, we have chosen Chittagong University of Engineering & Technology (CUET) for the present study to collect the sample. Among the students, there is a similarity concerning purchase behavior, fashion patterns, clothing preferences, lifestyle, and so on. Thus, CUET which is located in the Chattogram district, the southern part of Bangladesh has been taken as the sampling area in this study.

For the collection of primary data, the participants are randomly selected between the age group of 18 – 24 and requested to provide the information by completing the questionnaire form. For the collection of data, a pilot survey was conducted before setting the final questionnaire. Quantitative and qualitative data have been used for this study. The objectives of the present study were focused on the questions' design. The survey measured participant responses regarding their impact on clothing behavior using a Likert scale. The numerical scores of 1 to 5 have been assigned against the answers of strongly disagree - strongly agree. Additional questions were also included for more information about participants' such as ages, gender, and monthly income. The findings have been presented in four different groups: the first one is fiber content in clothing, the second one is clothing choice, the third one is understanding of cotton, and the last one is marketing influences on clothing purchases. The following steps have been taken to complete the current study.

Step I: Primary data was collected using a questionnaire and secondary data was collected from the sources of the internet and relative journals.

Step II: Sample size – 200 (male 65% and Female 35%). Important information has been illustrated through pie charts and bar diagrams.

Step III: The total Questionnaire is divided into four diversified scales which are awareness of fiber cotton, influences the generation's awareness of clothing choice to wear, understanding of cotton in clothing, and marketing influence the generation's cotton clothing purchase decisions.

Step IV: The collected primary data has been analyzed using Microsoft Excel.

Step V: Concluding the purchase behavior for the primary factors and further suggestions

- Research Type: Descriptive Research
- Sources of Data: Primary Data
- Research Approach: Survey Method
- Data Collection Tool: Self-structured Questionnaire
- Type of Questionnaire: Structured (Close-ended)
- The technique of Data Analysis: Z-test and Chi-square test

Sampling Plan:

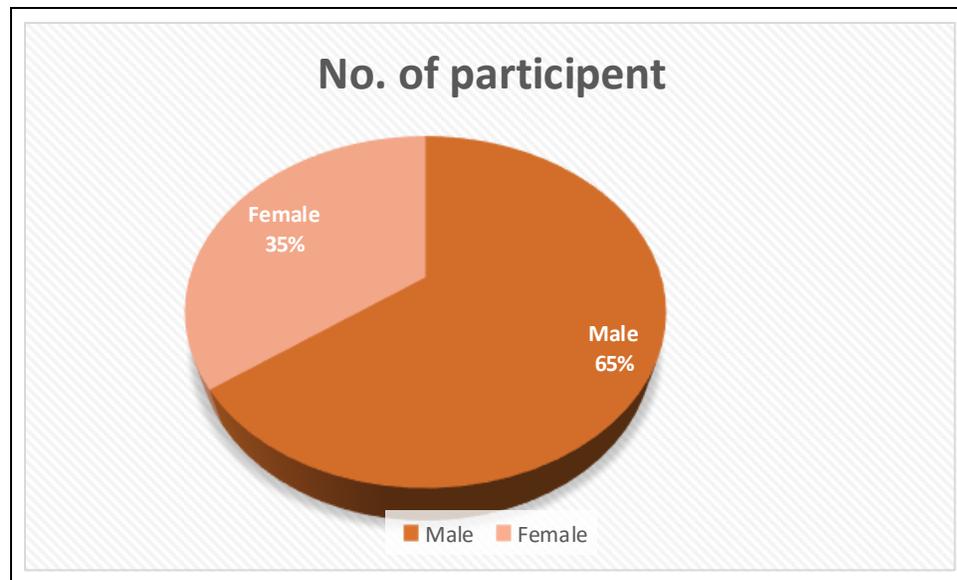
- i) Study Population: Chattogram district of Bangladesh
- ii) Sampling Area: University Students (18 – 24 years)
- iii) Sampling Unit: One University
- iv) Sample Size: 200
- v) Sampling Technique: Convenient Sampling

3. DATA ANALYSIS AND INTERPRETATION

The survey has been established to answer the research goals of the present study. The survey was presented through 18 questions and the respondents rated their responses as follows: strongly agree – 5, agree – 4, neutral – 3, disagree – 2, and strongly disagree – 1. The mean and standard deviation for each statement has been calculated. The results have been divided into percentage and Chi-square analyses for further clarification.

Demographic Profile

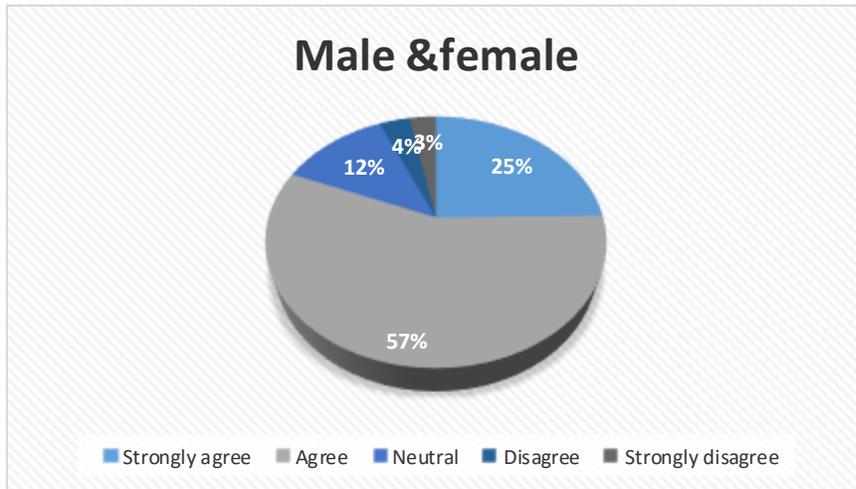
Gender	Frequency	Percentage(%)
Male	130	65%
Female	70	35%
Total	200	100%



The above diagram depicts that out of the total 200 respondents, 65% of the respondents were male, and 35% were female respondents.

Statement 1: Understanding the fiber content in clothing

Gender	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Male & female	24.75%	56.50%	12.25%	3.50%	3%



The above diagram illustrates that out of the total 200 respondents, 57% of the respondents agreed, 25% strongly agreed, 12% were neutral, 4% disagreed, and 3% strongly disagreed with statement 1.

Statement 2: Clothing Choice Factor

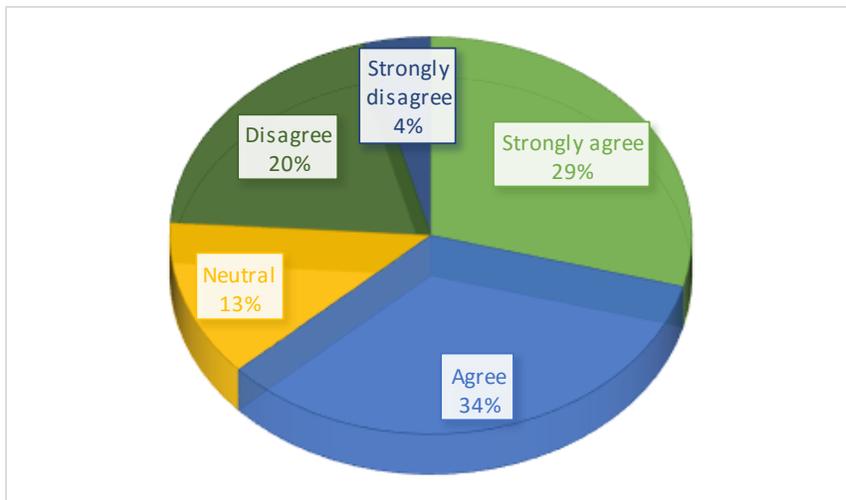
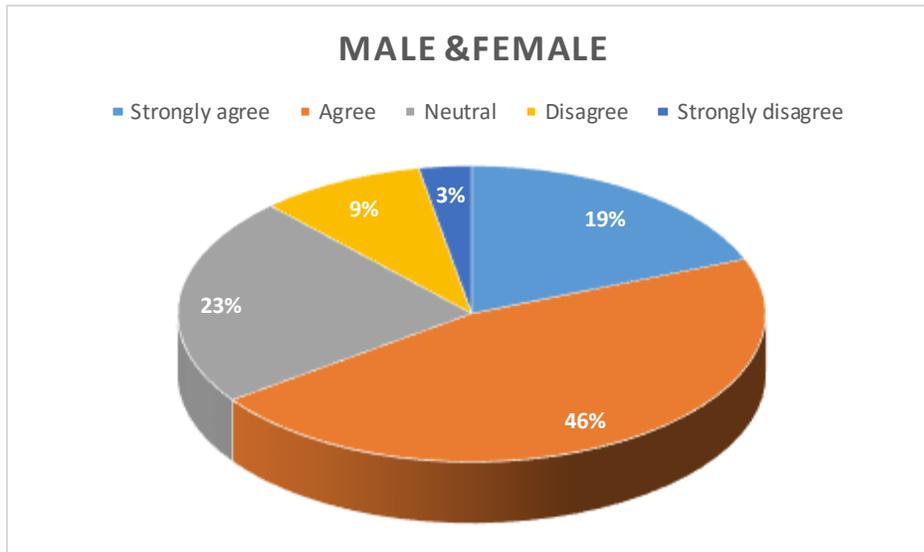


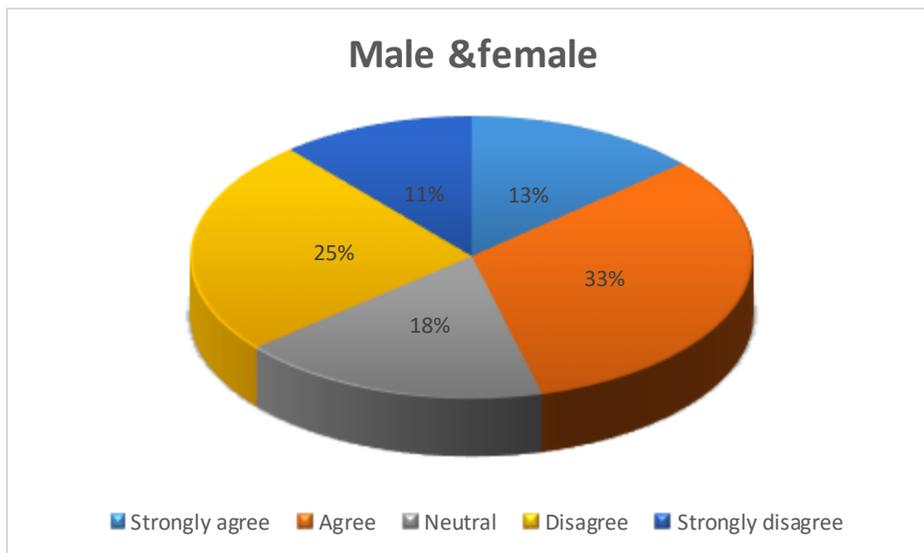
Illustration: The diagram depicts that out of the total 200 respondents, 34% of the respondents agreed, 29% strongly agreed, 13% were neutral, 20% disagreed, and 4% strongly disagreed with statement 2.

Statement 3: Knowledge of Cotton in Clothes



The diagram depicts that out of the total 200 respondents, 46% of the respondents agreed, 19% strongly agreed, 3% were neutral, 9% disagreed, and 3% strongly disagreed with statement 3.

Statement 4: Influences of Marketing on Clothing Purchases



The diagram illustrates that out of the total 200 respondents, 33% of the respondents agreed, 13% strongly agreed, 18% were neutral, 25% disagreed, and 11% strongly disagreed with statement 4.

4. MEASUREMENT OF DEPENDENT VARIABLE

Consumer preferences of purchase behavior are considered as dependent variables for this study. To measure the preference of cotton cloths their choice was identified during the answering of the questions. A 5-point Rikart scale has been developed to explore the preference index of cotton cloths. The preference index of a respondent could fall from 0 to 5 where 0 indicates no satisfaction, 5 indicates high satisfaction, 4 indicates satisfaction, 3 indicates neutral, 2 indicates dissatisfied, and 1 indicates highly dissatisfied. The consumer preferences index for different independent factors by respondents is given in Table 1. From Table 1 it is observed that the maximum value of the preference index, the higher the purchase behavior for that particular

factor. Hence, price (4.31) is the most important factor for the purchasing behavior of cotton cloths, followed by comfort (4.22) of the cotton fabric, type of fiber(4.10), manufacturers' websites (3.89), manufacturers' Facebook (3.84), fiber Awareness (3.71), Brand names (3.70), Prefer of cotton cloth(3.64), Magazine advertisements (3.54), Television advertisements (3.36), Radio advertisements (3.32), Durability (3.31), Internet advertisements (3.20), Influences of friends wear (3.10), and Facebook and Twitter (2.83).

Table 1: Consumers' Preference Index for Independent Factors

Independent factors	No of respondents	Level of satisfaction					Preference index
		Highly satisfied (5)	Satisfied (4)	Neutral (3)	Dissatisfied (2)	Highly dissatisfied (1)	
Fiber awareness	200	40	107	28	10	10	3.71
Type of fiber	200	54	119	21	4	2	4.10
Brand names	200	56	73	30	36	5	3.70
Price	200	101	74	10	15	0	4.31
Influences of friends wear	200	17	57	66	48	12	3.10
Prefer cotton cloth	200	48	81	36	20	15	3.64
Comfortable	200	72	100	28	0	0	4.22
Durability	200	33	62	51	42	12	3.31
Television advertisements	200	26	83	39	40	12	3.36
Radio advertisements	200	24	69	65	30	12	3.32
Internet advertisements	200	22	70	55	31	22	3.20
Facebook and Twitter	200	24	51	28	61	36	2.83
Clothing manufacturers' Facebook	200	50	104	22	11	13	3.84
Clothing manufacturers' websites	200	48	106	29	9	8	3.89
Magazine advertisements	200	38	60	78	19	5	3.54

5. COMPARATIVE DATA ANALYSIS FOR MALE AND FEMALE RESPONDENTS

Statement 1: Awareness of fiber content in clothing for male and female (fiber awareness and fiber content)

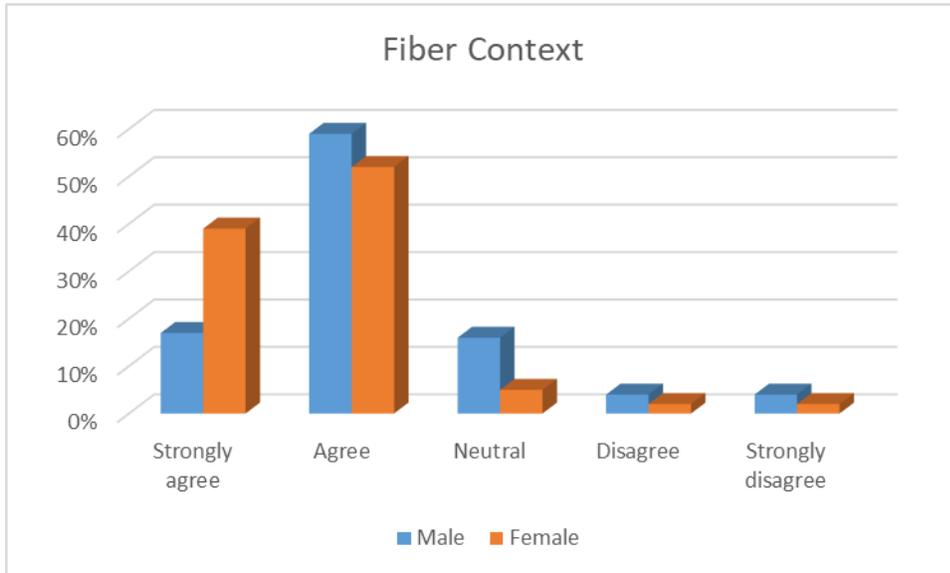
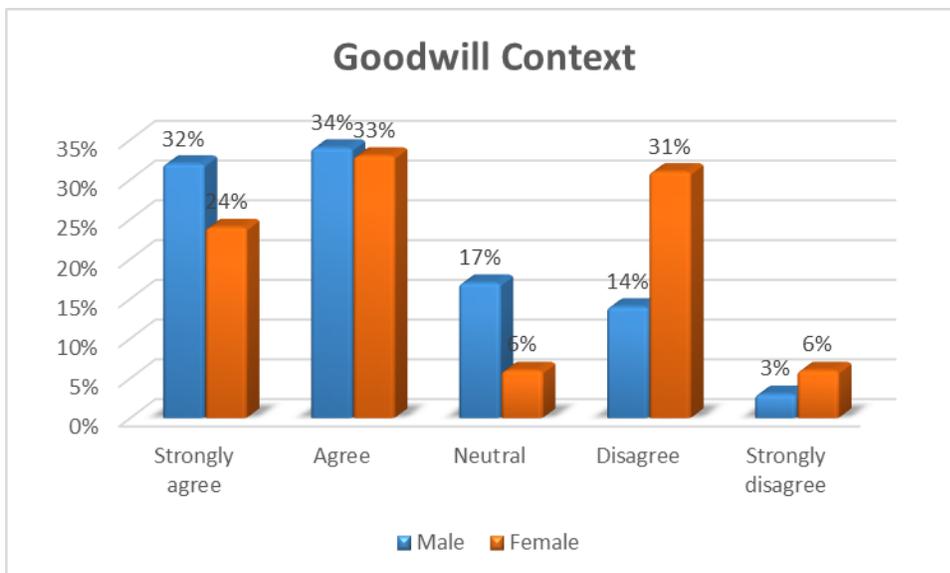


Illustration: The above diagram illustrates that out of the 130 male respondents, 59% of the respondent agreed, 17% strongly agreed, 16% were neutral, 4% disagreed, and 4% strongly disagreed the other hand from 70 female respondents 52% of the respondents agreed, 39% strongly agreed, 5% are neutral, 2% disagree, and 2% strongly disagrees with statement 1.

Statement 2: What sways the generation's consciousness of the apparel they wear? (brand name, price of cotton cloth, friends wear)

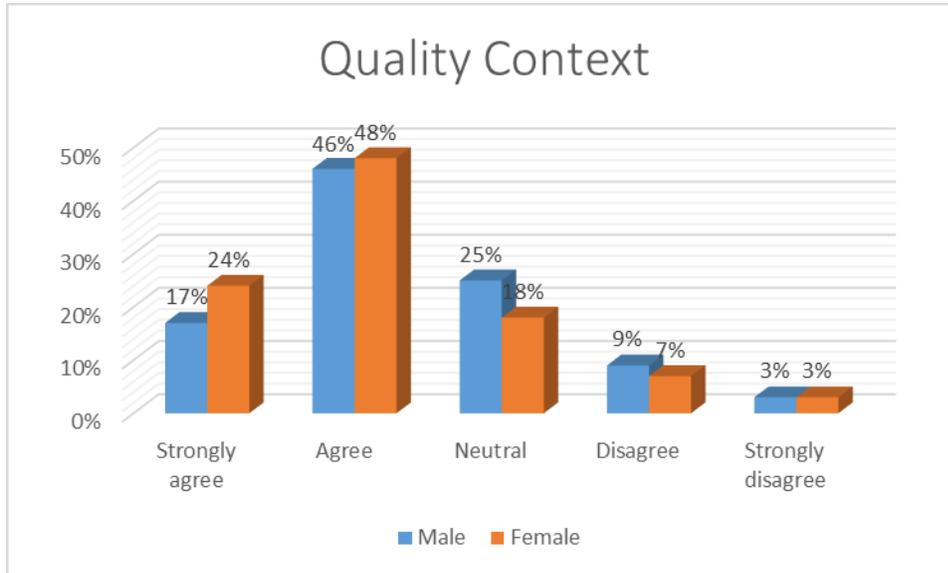
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Male	32%	34%	17%	14%	3%
Female	24%	33%	6%	31%	6%



The above diagram illustrates that out of the 130 male respondents, 34% of the respondent agreed, 32% strongly agreed, 16% were neutral, 14% disagreed, and 3% strongly disagreed on the other hand from 70 female respondents 33% of the respondents agreed, 24% strongly agreed, 6% are neutral, 31% disagree, and 6% strongly disagrees with statement 2.

Statement 3: Do younger generations recognize cotton as a strong, adaptable, durable, versatile, affordable, cotton prefer, and comfortable fabric?

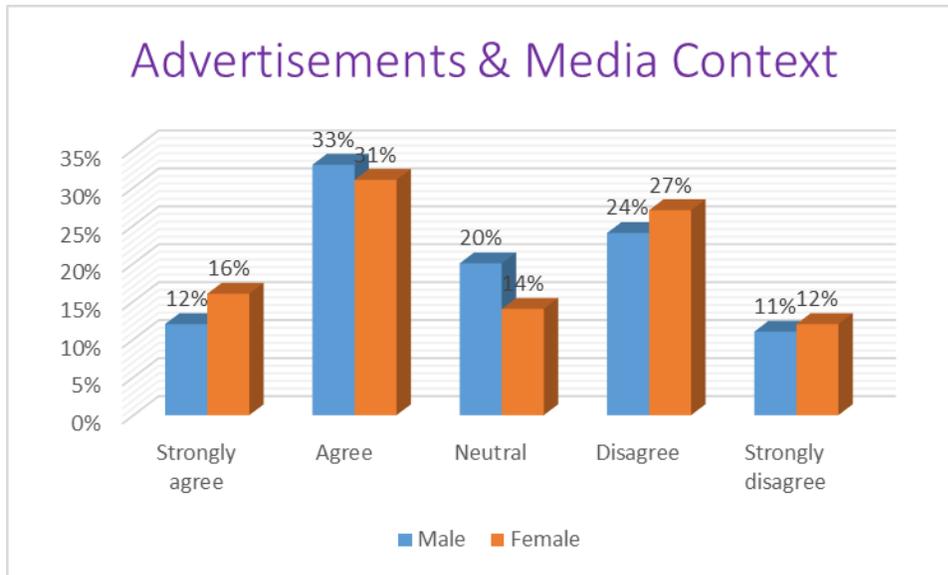
Gender	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Male	17%	46%	25%	9%	3%
Female	24%	48%	18%	7%	3%



The above diagram illustrates that out of the 130 male respondents, 46% of the respondent agreed, 17% strongly agreed, 25% were neutral, 9% disagreed, and 3% strongly disagreed on the other hand from 70 female respondents 48% of the respondents agreed, 24% strongly agreed, 6% are neutral, 7% disagree, and 3% strongly disagrees with statement 3.

Statement 4: What marketing strategies affect the generation's decisions to buy cotton clothing? (TV advertisements, radio advertisements, Facebook and Twitter, internet advertising, manufacturers' Facebook)

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Male	12%	33%	20%	24%	11%
Female	16%	31%	14%	27%	12%



The above diagram illustrates that out of the 130 male respondents, 33% of the respondent agreed, 17% strongly agreed, 20% were neutral, 24% disagreed, and 11% strongly disagreed on the other hand from 70 female respondents 31% of the respondent agreed, 16% strongly agreed, 14% are neutral, 27% disagree, and 12% strongly disagree with statement 4.

6. STATISTICAL ANALYSIS

The data was utilized to identify the key determinants of cotton apparel purchasing decisions and marketing influences in the 18–24 age range. To calculate the participant's level of agreement with each statement, the mean and standard deviation for each forced-choice response were calculated. Each choice's quantity and frequency were also recorded.

6.1. Chi-Square Test for Observed Frequencies and Expected Frequencies ff Fiber Awareness of Male and Female Respondents

Step 1: H₀: There is no significant difference between observed and expected frequencies in fiber awareness of gender.

H₁: There is a significant difference between observed and expected frequencies in fiber awareness of gender.

Step 2: The level of significance is set at 1%, 5%, and 10% respectively and the corresponding Chi-square values are 13.28, 9.49, and 7.78 respectively for 4 degrees of freedom.

Step 3: The Chi-square test statistic has been applied.

Step 4: The degrees of freedom equal (5-1) = 4. If the calculated value of the Chi-square is greater than the critical value of the Chi-square then the null hypothesis will reject and vice-versa.

Step 5: The Chi-square ($\chi^2 = \sum \frac{(O - E)^2}{E}$) table is constructed [here, O = observed frequencies and E = expected frequencies].

Table 2: Chi-square table for fiber awareness of male and female consumers during purchasing behavior of cotton clothing

Observed values (O)	Expected values (E)	O - E	(O - E) ²	$\frac{(O - E)^2}{E}$	P - value		
					1%	5%	10%
21	31	-10	100	3.225806	.168565	.168565	.168565
69	59	10	100	1.694915			
23	25	-2	4	0.16			

9	7	2	4	0.571429	
8	10	-2	4	0.4	
27	25	2	4	0.16	
36	35	1	1	0.028571	
4	5	-1	1	0.2	
2	2	0	0	0	
1	1	0	0	0	
$\chi^2 = 6.440722$					

From Table 2 it is observed that at 1%, 5%, and 10% levels of significance, the p-value is > 0.01, 0.05, 0.1 which relates to the acceptance of the null hypothesis.

6.2. Chi-Square Test for Observed Frequencies and Expected Frequencies of the Fiber Content of Male Respondents

Step 1: H₀: There is no significant difference between observed and expected frequencies in the case of fiber content.

H₁: There is a significant difference between observed and expected frequencies in the case of fiber content.

Table 3: Chi-square table for the fiber content of male consumers during purchasing behavior of cotton clothing

Observed values (O)	Expected values (E)	O - E	(O - E) ²	$\frac{(O - E)^2}{E}$	P - value		
					1%	5%	10%
23	26	-3	9	0.346154	0.000084	0.000084	0.000084
84	70	14	196	2.8			
19	18	1	1	0.055556			
2	20	-18	324	16.2			
2	8	-6	36	4.5			
$\chi^2 = 23.90171$							

From Table 3 it is observed that there is a significant difference between observed and expected frequencies in the case of fiber content during the purchase of cotton clothing at 1%, 5%, and 10% levels of significance.

6.3. Chi-Square Test for Observed Frequencies and Expected Frequencies for Clothing Choice Factors on Purchase Behavior

Step 1: H₀: There is no significant difference between observed and expected frequencies in the case of clothing choice factors.

H₁: There is a significant difference between observed and expected frequencies in the case of clothing choice factors.

Table 4: Chi-square table for clothing choice factors on purchase behavior

Observed values (O)	Expected values (E)	O - E	(O - E) ²	$\frac{(O - E)^2}{E}$	P - value		
					1%	5%	10%
37	35	2	4	0.114286	.062566	.062566	.062566
46	45	1	1	0.022222			
28	18	10	100	5.555556			
15	20	-5	25	1.25			
4	8	-4	16	2			
$\chi^2 = 8.942063$							

From Table 4 it is observed that we can not reject the null hypothesis at 1% and 5% levels of significance but at a 10% level of significance, the alternate hypothesis can be accepted.

6.4. Chi-Square Test for Observed Frequencies and Expected Frequencies for Knowledge of Cotton on Purchase Behavior

Step 1: H₀: There is no significant difference between observed and expected frequencies in the case of knowledge of cotton.

H₁: There is a significant difference between observed and expected frequencies in the case of knowledge of cotton.

Table 5: Chi-square table for knowledge of cotton on purchase behavior

Observed values (O)	Expected values (E)	$O - E$	$(O - E)^2$	$\frac{(O - E)^2}{E}$	P - value		
					1%	5%	10%
39	36	3	9	0.25	.379332.	.379332.	.379332.
74	70	4	16	0.228571			
16	19	-3	9	0.473684			
1	4	-3	9	2.25			
0	1	-1	1	1			
				$\chi^2 = 4.202256$			

From Table 5 it is observed that at 1%, 5%, and 10% levels of significance, with degrees of freedom 4, we can not reject the null hypothesis. It is also seen that at 1%, 5%, and 10% levels of significance, the p-value is > 0.01, 0.05, and 0.1 respectively which relates to the acceptance of the null hypothesis. The P-value is greater than 0.379332. Therefore, the result is not significant at p < .05, 0.01, and 0.1 respectively.

6.5. Chi-Square Test for Observed Frequencies and Expected Frequencies for the Influence of Advertising on Purchase Behavior

Step 1: H₀: There is no significant difference between observed and expected frequencies in the case of advertising.

H₁: There is a significant difference between observed and expected frequencies in the case of advertising.

Table 6: Chi-square table for the influence of advertising on purchase behavior

Observed values (O)	Expected values (E)	$O - E$	$(O - E)^2$	$\frac{(O - E)^2}{E}$	P - value		
					1%	5%	10%
21	21	0	0	0	.982949	.982949	.982949
32	35	-3	9	0.257143			
22	21	1	1	0.047619			
38	37	1	1	0.027027			
17	16	1	1	0.0625			
				$\chi^2 = 0.394289$			

From Table 6 it is observed that at 1%, 5%, and 10% levels of significance with degrees of freedom 4, we can not reject the null hypothesis. It is also seen that at 1%, 5%, and 10% levels of significance, the p-value is > 0.01, 0.05, and 0.1 respectively which relates to the acceptance of the null hypothesis. It is concluded there is no significant difference between the observed frequency and expected frequency for the influence of advertisements during purchasing. The P-value is 0.982949. The result is not significant at p < .05, 0.01, and 0.1 respectively.

6.6. Z- test between male and female consumers about awareness of fiber content

Step 1: The sample mean (\bar{X}) and sample standard deviation(S.D.) S is calculated by using the following formula: Mean

$$\bar{X} = \frac{\sum fx}{n} \text{ and standard deviation (S.D.) } S = \sqrt{\frac{\sum f(x - \bar{X})^2}{n - 1}} . \text{ Here } (\bar{X}) \text{ is the sample mean, f is the frequency, n is the sample size, and S is the sample standard deviation.}$$

Step 2: The confidence interval(CI) for the population mean is calculated by using this formula $\bar{X} \pm Z_{\alpha/2} \frac{S}{\sqrt{n}}$. Here $Z_{\alpha/2}$ is the critical value of the Z distribution and $\alpha = 0.05$ is the level of significance.

Step 3: Null hypothesis, H_0 : Male and female consumers have no significant difference in fiber awareness of cotton clothing.

The alternative hypothesis, H_1 : Male and female consumers have a significant difference in fiber awareness of cotton clothing.

Step 4: Test statistics. Calculated the Z value by applying the formula $Z = \frac{(\bar{X}_m - \bar{X}_f)}{S_D}$. Where $S_D = \sqrt{S_m^2 + S_f^2}$

is the standard error of the difference between means, $S_m = \frac{S_1}{\sqrt{n}}$ is the standard error of the means of the male group,

$S_f = \frac{S_2}{\sqrt{n}}$ is the standard error of the means of the female group, S_1 is the standard deviation of the male group, S_2 is

the standard deviation of the female group, and sample size n is 200. Compare the Z value at a 5% level of significance.

Table 7: Calculation of Z value for fiber awareness between male and female consumers

Mean \bar{X}_m	S.D. S_1	Mean \bar{X}_f	S.D. S_2	$S_m = \frac{S_1}{\sqrt{n}}$	$S_f = \frac{S_2}{\sqrt{n}}$	$S_D = \sqrt{S_m^2 + S_f^2}$	$Z = \frac{(\bar{X}_m - \bar{X}_f)}{S_D}$
4.24	1.1	4.37	1.11	0.096	0.097	0.136	0.96

From Table 7 it is observed that the Z calculated value is 0.96 which ensures the acceptance of the null hypothesis. Therefore, it is concluded that male and female consumers have no significant difference in fiber awareness during purchasing cotton clothing.

Table 8: Calculation of Z value for clothing choice factors between male and female consumers

Mean \bar{X}_m	S.D. S_1	Mean \bar{X}_f	S.D. S_2	$S_m = \frac{S_1}{\sqrt{n}}$	$S_f = \frac{S_2}{\sqrt{n}}$	$S_D = \sqrt{S_m^2 + S_f^2}$	$Z = \frac{(\bar{X}_m - \bar{X}_f)}{S_D}$
3.78	1.19	3.38	1.4	0.11	0.12	0.16	2.48

From Table 8 it is observed that the Z calculated value is 2.48 which which ensures the acceptance of the alternative hypothesis. Therefore, it is concluded that male and female consumers have a significant difference in clothing choice factors during purchasing cotton clothing.

Table 9: Calculation of Z value for knowledge of cotton between male and female consumers

Mean \bar{X}_m	S.D. S_1	Mean \bar{X}_f	S.D. S_2	$S_m = \frac{S_1}{\sqrt{n}}$	$S_f = \frac{S_2}{\sqrt{n}}$	$S_D = \sqrt{S_m^2 + S_f^2}$	$Z = \frac{(\bar{X}_m - \bar{X}_f)}{S_D}$
3.65	1.25	3.83	1.17	0.11	0.10	0.15	1.2

From Table 9 it is observed that the Z calculated value is 1.2 which ensures the acceptance of the null hypothesis. Therefore, it is concluded that male and female consumers have no significant difference in knowledge of cotton during purchasing cotton clothing.

Table 10: Calculation of Z value for influences of marketing between male and female consumers

Mean \bar{X}_m	S.D. S_1	Mean \bar{X}_f	S.D. S_2	$S_m = \frac{S_1}{\sqrt{n}}$	$S_f = \frac{S_2}{\sqrt{n}}$	$S_D = \sqrt{S_m^2 + S_f^2}$	$Z = \frac{(\bar{X}_m - \bar{X}_f)}{S_D}$
3.11	1.58	3.12	1.57	0.14	0.20	0.20	0.05

From Table 10 it is observed that the Z calculated value is 1.2 which ensures the acceptance of the null hypothesis. Therefore, it is concluded that male and female consumers have no significant difference in advertising during purchasing cotton clothing.

Table 11: Calculation of μ for fiber awareness on purchase behavior

Frequency f	Likert Scale (X)	fX	Mean \bar{X}	$X - \bar{X}$	$(X - \bar{X})^2$	$f(X - \bar{X})^2$	$s = \sqrt{\frac{\sum f(x-\bar{x})^2}{n-1}}$	Population Mean, $\mu = \bar{X} \pm Z_{\alpha/2} \frac{S}{\sqrt{n}}$
21	5	105	3.66	1.338462	1.791479	37.62107	0.6628	$3.55 \leq \mu \leq 3.78$
69	4	276		0.338462	0.114556	7.904379		
23	3	69		-0.66154	0.437633	10.06555		
9	2	18		-1.66154	2.760709	24.84638		
8	1	8		-2.66154	7.083785	56.67028		
$n = 130$		$\sum fX = 476$				137.1076		
Z critical value is ± 1.96								

Table 12: Calculation of μ for fiber content on purchase behavior

Frequency f	Likert Scale (X)	fX	Mean \bar{X}	$X - \bar{X}$	$(X - \bar{X})^2$	$f(X - \bar{X})^2$	$s = \sqrt{\frac{\sum f(x-\bar{x})^2}{n-1}}$	Population Mean, $\mu = \bar{X} \pm Z_{\alpha/2} \frac{S}{\sqrt{n}}$
23	5	115	3.95	1.046154	1.094438	25.17207	0.367797	$3.89 \leq \mu \leq 4.02$
84	4	336	3.95	0.046154	0.00213	0.178935		
19	3	57	3.95	-0.95385	0.909822	17.28663		
2	2	4	3.95	-1.95385	3.817515	7.63503		
2	1	2	3.95	-2.95385	8.725207	17.45041		
$n = 130$		514				67.72308		
Z critical value is ± 1.96								

Table 13: Calculation of μ for clothing choice factors on purchase behavior

Mean \bar{X}	Standard deviation $S = \sqrt{\frac{\sum f(x - \bar{X})^2}{n - 1}}$	Population Mean, $\mu =$ $\bar{X} \pm Z_{\alpha/2} \frac{S}{\sqrt{n}}$
3.78	1.19	$3.58 \leq \mu \leq 3.98$
Z critical value is ± 1.96		

Table 14: Calculation of μ for knowledge of cotton on purchase behavior

Mean \bar{X}	Standard deviation $S = \sqrt{\frac{\sum f(x - \bar{X})^2}{n - 1}}$	Population Mean, $\mu =$ $\bar{X} \pm Z_{\alpha/2} \frac{S}{\sqrt{n}}$
3.65	1.25	$3.44 \leq \mu \leq 3.86$
Z critical value is ± 1.96		

Table 15: Calculation of μ for the influence of marketing on purchase behavior

Mean \bar{X}	Standard deviation $S = \sqrt{\frac{\sum f(x - \bar{X})^2}{n - 1}}$	Population Mean, $\mu =$ $\bar{X} \pm Z_{\alpha/2} \frac{S}{\sqrt{n}}$
3.11	1.58	$2.84 \leq \mu \leq 3.38$
Z critical value is ± 1.96		

8. CONCLUSIONS

The present study has focused on the key factors of the consumers buying behavior of cotton clothing. To achieve this objective, four research goals such as fiber content, awareness of clothing, understanding of cotton fabric, and marketing influence on purchase decisions have been established. It is observed that the maximum value of the preference index, the higher the purchase behavior for that particular factor. Hence, price (4.31) is the most important factor for the purchasing behavior of cotton cloths, followed by comfort (4.22) of the cotton fabric, type of fiber (4.10), manufacturers’ websites (3.89), manufacturers’ Facebook (3.84), fiber Awareness (3.71), Brand names (3.70), Prefer of cotton cloth(3.64), Magazine advertisements (3.54), Television advertisements (3.36), Radio advertisements (3.32), Durability (3.31), Internet advertisements (3.20), Influences of friends wear (3.10), and Facebook and Twitter (2.83). The researchers concluded that consumers perceive cotton as a cozy, enduring, and adaptable fabric. This group believes cotton is too expensive, albeit to a significantly smaller extent. Most marketing media had low mean ratings (under 2.0), which suggests that the consumer is a hesitant buyer. The researchers concluded that consumers are influenced to purchase cotton clothes by the factors internet, Facebook, and manufacturer websites.

The data has been analyzed with the help of statistical tools like percentage analysis, Z test, and Chi-square analysis. From the analysis, it is observed that 59% of the male respondents but 52 % of the female respondents agreed with awareness of fiber content in clothing, 34% of the male respondents but 33 % of the female respondents agreed with awareness of clothing to wear, 46% of the male respondent and 48 % of the female respondent agreed with cotton fabric as durable, versatile, and comfortable fabric, and 33% of the male respondent but 31 % of the female respondent agreed with marketing influence the cotton clothing purchase decisions. At a 95% confidence level, it is observed that male and female consumers have no significant difference in fiber awareness, knowledge of cotton, and advertising while purchasing cotton clothing but in the case of clothing choice factors a significant difference exists. From the Chi-square analysis it is concluded there is no significant difference between the observed frequency and expected frequency for the fiber awareness, knowledge of cotton, and advertising during purchasing but in the case of clothing choice factors a significant difference exists. Therefore, significant factors like price, comfort, fiber content, manufacturers’ websites, Facebook, awareness of fiber, brand names, and magazine advertisements play a major role in their purchase decisions.

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