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Measuring the effect of Colour Psychology on Consumer Buying Behavior

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Abstract

The primary objective of this research is to investigate the impact of color psychology on consumer purchasing decisions, as well as to determine whether gender plays a role in these behaviors. This study was conducted in Dehradun city, utilizing the street intercept method to gather data. Out of 411 distributed questionnaires, 385 were deemed suitable for analysis. The research methods included confirmatory factor analysis, independent sample t-tests, and the application of structural equation modeling. The findings reveal a significant correlation between color psychology and consumer purchasing patterns, while indicating that gender does not significantly influence consumer behavior.

Keywords- Consumer Brand Psychology, Colour, Visual Thinking, Communication

1. Introduction

Color associated with the product has its own significance in recognition of particular product or brand. Imagine a product with no color or background, you will have different imagination or we can say no imagination about that product. Color of the product is nothing but the reflection of the lights which create sensory imagination in our brain and finally a picture developed in our mind about that particular product or brand. In consumer psychology color has its own meaning which influence the buying behavior of the customers. The color combination incorporated with the product has its unique identification which helps in differentiating the one product from anther product. The color of the product has its relationship with the genders also. Enough evidence available which indicates the relation of color with gender like pink is the favorite color of females. Blue is the most popular color among males. According to proponent of color psychology the color defines a personality trait. The color choice tells us a lot about an individual and it is attached with emotion, physical and mental state. It is also found from the research that color you dislike also define your weakness. The ten colors which dominate in defining the personality trait are: -

1. Red: - Red color personality identifies extrovert and optimistic personality. The individual bearing this personality trait are courageous and confident.

2. Orange: - Orange color represents a personality trait that inclined a great need for socialization means a kind of extrovert personality trait.

3. Yellow: - Yellow represents a personality trait which inclined towards happiness and love

4. Green: - Green color represents a personality trait for individuals who are down towards the earth and environment friendly.

5. Blue: - Blue color represents the personality traits that are deep rotted for personal inner peace a kind of introvert personality trait.

6. Pink: - Pink color is the favorite color among females and most preferred color among females when question of deciding the particular color choice is concerned.

7. Black: - Black color represents the personality trait who believes in premium. Color which represents status symbol.

8. White: - White color represents a personality trait in which individual want a peaceful felling while selecting that color.

9. Purple: -Purple color represents the personality traits that are spiritual and is said to be good judge of characters.

10. Turquoise: - Turquoise color represents a personality trait of deep need to create an emotional balance in the life.

Colors are very important in marketing a particular product or brand because it is one of the strong bases for differentiating one brand from another brand. Color combination approach in designing a product play significant role in creating a completive edge difference among the competitors. Marketer always treats to create a color structure which suit to the nature of the product and consumer. They try to establish an emotional attachment relationship between consumers and product. Color tigers a diverse set of responses within the cerebral cortex of the brain and it reaches to the brain through nervous system. The perception of an individual about a color has its own importance to human evolution and enough evidence in this context is available in the secondary research. Once we identify a particular color it produces a chemical reaction inside the brain and generates an emotional vibration which create a connection between individual and product. This response gives a meaningful thought and a memory is developed in our brain about that event, place, people or product. Color conveys a mod and emotional state in the mind of the customers. Each color conveys a mood and emotion and marketers smartly used this color psychology in the promotion of their product or service. When you visit any

restaurant, you find different color which is one of the important aspects of marketing when a question of physical evidence is concerned. The first impression which comes to the minds before an individual experience is the internal ambiance. Example IBM apply royal blue color which define stability and reliability about their product and services. Color is the basic foundation who provides visual identity to a brand and creates difference from the competitors. Studies from literature available in secondary data confirmed that 60 to 80% of customer prefers color choice in priority when they decide to buy a particular product. The color of the product evokes emotion and sense of felling about the product. That is why companies pay special attention while designing the color pattern of the product. The logo, punch line their letter and color pattern play significant role in influencing the buying behavior of the customers. By simply displaying a logo and color a loyal customer recognizes the product or brand. It is evident from the research that 90 % of the customers make the judgment about the product on the basis of color design associated with the product. Colors play important role in influencing the buying behavior of the customers and it has a relationship with the brand recognitions also which differentiated one brand from another brand. Hence, the objectives of study are to explore the role of color psychology in influencing the consumer's buying behavior also study the effect of gender on consumer's buying behavior.

2. Literature review

Color

According to the Cambridge English Dictionary, color is defined as the appearance resulting from the way an object reflects light. Colors become visible when objects reflect certain wavelengths of light, which are not absorbed due to their atomic makeup. These reflected wavelengths reach our eyes, where cone cells in the retina convert them into neural impulses, shaping our perception of color. These cone cells, along with rod cells – which are more sensitive in low light conditions – are the primary photoreceptors in our eyes. This concept was explored by Pappa (2010) in his study "How We See Colors". Color thus acts as a form of non-verbal communication, with each hue embodying distinct energies and meanings that can shift depending on an individual's current state. The interpretation of colors also varies across different cultures and contexts. In the context of consumer behavior, individuals are often drawn to products that evoke specific tastes and memories. Consequently, marketers focus on creatively designing their brands, contemplating the most effective colors for print and digital media, and choosing impactful colors for advertising materials.

Color Psychology

Jung et al. (2015) attribute the origins of color psychology to Carl Gustav Jung, a renowned psychologist whose pioneering work laid the foundation for this field. Jung's fascination with the significance and components of colors and their application in psychotherapy was a critical starting point. Psychotherapy, which involves interactions with individuals experiencing psychological distress, was enriched by Jung's extensive research. He adeptly linked art symbolisms to color codes and languages. The influence of color on individuals is multifaceted, shaped by factors such as personal experiences, cultural background, religious beliefs, natural

surroundings, gender, race, and nationality. In the realm of communication, color choices not only convey direct messages but also reflect secondary brand values and attributes. Therapists specializing in color healing often recommend specific hues to address emotional issues like anger, depression, or resentment. Utilizing color-themed crystals can lead to enhanced mood and positivity. The historical use of colors to evoke calmness or vibrancy is well-documented. However, individual responses to colors can vary greatly. For instance, in America, blue is the most preferred color for 35% of the population, followed by green, purple, and red (as stated by Kathy Lamancusa in 'Emotional Reactions to Color'). There's evidence suggesting that color preferences might be influenced by body temperature, with those feeling colder gravitating towards warm colors like red and yellow, while individuals with a warmer body temperature might prefer cooler shades. Whitfield and Wiltshire's 1990 study suggests a gender-based preference, with women typically favoring warmer colors and men cooler ones. Cultural background also plays a significant role in color preferences, with studies showing that people from the same region, irrespective of race, often share similar color preferences. Furthermore, preferences can vary significantly between different regions or countries, highlighting the complex interplay of culture and color perception.Maria Carine Cases and Justine Chinoperekweyi (2019) the authors after their finding found that color psychology influence the buying behavior of the consumers in such a way that choosing right color create desired emotion emotions in the minds of the consumers and it influence the consumer to buy the particular product. The effect of color on a person’s psychology varies from individual to individuals. Grind (2018) states that color play important task in designing which help in distinguishing the product. This is the first characteristics that help the people to distinguish one product form other.Lamancusa(2016) states that the perception about a color is the association of felling, opinion and attitude towards a specific color. Bailey (2018) concluded his research that, the perception about a color varies from individual and is very subjective in nature. It is because people have different ideas, experience and preference while choosing the particular color. Davis (2000) the author stated that, the perception about a color is involved the influence of color on human behavior and its impact on perception that we generally unaware off. Wright (2004) the author after their finding found that the color bring ability to recognize color as warning signals. These help the advertisers to design the content pattern which influence the consumer to buy the particular products.Kleijenet al. (1996) in their finding found that color associated with the medicine influence the perceptions of a patient about a particular drug. The patient believes that positive felling they associate unconsciously with the color of pills or tablet will improve their health, though they are not aware of actual substance in it. Loyota (2007) indicated that using appropriate color to manifest message enhance that attention of the color by 82% and it helps in brand recognition by 80%. Color also create positive image in the mind of the customers. Keller and Lehman (2006) found that the core of wrong color while designing a product may deliver wrong message in terms of enterprise perspective. Schmitt (1997) specified in his finding that the identity of brand includes the visual factors like – color, line type and form. Brand identity provides a visible impact in the mind of the customers and creates competitive advantage. Gob’s (2001) indicated that the message of a color to a particular individual is the association of results in cultural and physical reactions. Pertry and Wisonon (2003) studied that the output of each color is result of the various

reactions Derrick Daye (2012) concluded his research that adds in advertisement are reads up to 42% more as compared to black and white adds. Naa Ree Lee (2007) after his finding states that color as a sign in a product offer much interpretation, rather than the only one of looking at a product. Human experience brings sensation in the mind of the consumers and finally influences the buying behavior. Ayn E. Crowley (1993) mentioned in their finding that certain colors are more active and activating the brain very actively, but there are color which directing the human brain. Kotlerand Keller (2006) said consumers gives preference to particular color against particular product classes based on learning and that became dependencies between colors and product choice. Behnound (2012) stated that consumers like to acquire the color of a particular product based on the experience and relation they experimented with the particular product. If the experience of a consumer about a particular color is pleasant he or she may prefer to buy the same color of product in near future also. Luscher and Sott (2003) found that blue color and green color are very cool, but color like red and orange are stimulating color .Trent (2000) found that we in general are very much affected by the nature and surrounding, the nature is so deeply rooted in our personality that this effect our soul also. The producer must be assured that while designing the color pattern or color preference the product should be priotized accordingly. Aslam (2006) found that the color can be strategically used in marketing campaign to influence the buying behavior. Silayoi and Speece (2007) states that only few customers focus on product detail and labels attach, but majority of the customer are influenced by the visual appeal induced by the marketer in their promotional campaign .Singh (2006) reviewed after their finding that 60 to 90% of the appraisal is exclusively driven by color. It has been found that color is the central attribute which influence the buying behavior of the customers most while buying a product. Funk and Nidubisi (2006) states that color of a product arose the positive impact in the mind of the customers and it create interest, which finally motivate a customer's towards buying the product .Bosman and Erasmum (2017) found that, while designing a packaging of a product if the company fail to apply appropriate color it will affect the sales of the product. The author also suggested that while designing the color of packaging it should be chosen wisely. Sun,Adhikari and Koppel (2019) said that color on packaging some time create a fear in the mind of the customers and that may lead to the rejection of the product. Gofmon (2012) found that color of packaging play important in differentiating the product of one company from another company. Bublet al. (2019) found that many interpersonal and situational factors influence the perception of a customer's assigned to a particular product Fairchild (2013) stated that color has three basic properties which include lightness, chroma and Hue. Hamphill (1996) emphasized the profound impact of color in marketing, noting that it influences approximately 85% of consumer purchasing decisions. Further studies have confirmed that the visual environment, including color, can elicit emotional reactions in consumers, as discussed by Machleit and Eroglu in 2000. These emotional responses are known to affect shopping behavior and outcomes, as explored by Donovan and Rossiter in 1982, and later by Darden and Babin in 1994, and Sherman, Mathur, and Smith in 1997. An often overlooked aspect in the retail environment is the influence of the color of the store's interior, as Turley and Milliman highlighted in 2000.

To understand human reactions to color, it's essential to map colors on a continuum based on the spectrum of visible light. This spectrum arranges colors in order of the wavelength associated with each hue. Colors can be methodically arranged from those with longer wavelengths to shorter ones, namely: red, orange, yellow, green, blue, and violet, as demonstrated in Figure 1.

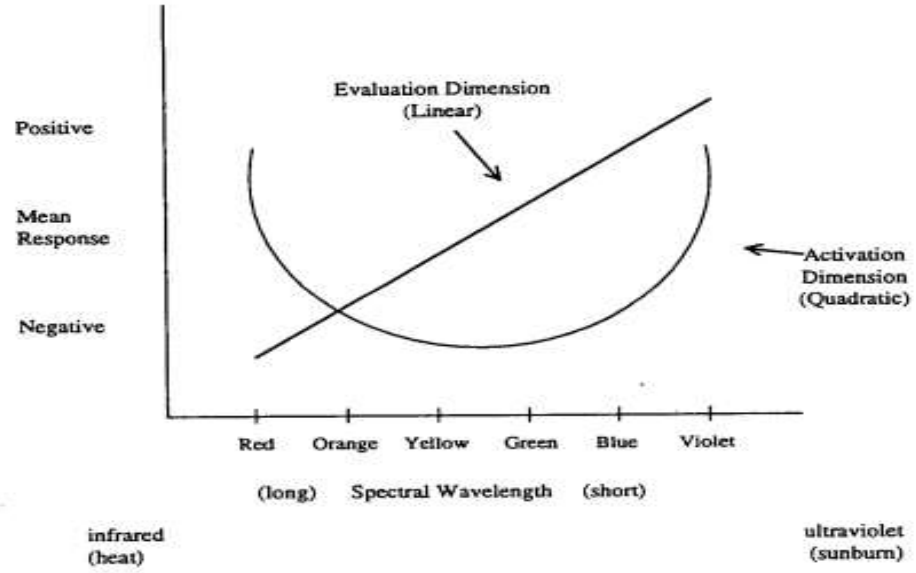

Figure 1. "Two dimensions" hypothesis regarding consumer response to color.

Wilson (1966) pointed out that wavelengths slightly lengthier than visible red are infrared or heat generating wavelengths. At the contradictory end of the spectrum, elsewhere the visible blue / purple wavelengths, are ultraviolet or sunburn wavelengths (Pavey, 1980).

In the field of environmental psychology, Mehrabian and Russell (1974) outlined three emotional dimensions: 'Pleasure', 'Arousal', and 'Dominance'. 'Pleasure' measures how content or joyful a person feels in an environment. 'Arousal' gauges the level of environmental stimulation on an individual, and 'Dominance' relates to the extent one feels in control or influential in their surroundings. A study on atmospheric effects distinguished two interconnected dimensions of affect - positive and negative - without isolating arousal as a separate component, asserting its consistent positive or negative connotations in retail settings (Babin and Attaway, 2000). Gröppel-Klein (1998) noted that 'arousal' and 'pleasure' often merge into 'positive activation' in retail, acknowledging that consumers can experience both a pleasurable state of low arousal (relaxation) and, conversely, find excessive arousal overwhelming.

Beach et al. (1988) and Valdez (1993) observed that most color research, primarily based on color chip evaluations, has limitations. Valdez (1993) emphasized the need for reliable and comprehensive methods to measure emotional responses to color. Further research by Valdez and Mehrabian (1994) endorsed the PAD-scale (Pleasure-Arousal-Dominance) when examining emotional reactions to color's hue, saturation, and brightness. Middlestadt (1990) highlighted that over 80% of visual information is color-related, which can create diverse sensory, cognitive, and emotional impacts. Grossman and Wisenblit (1999) discussed how understanding

color's physiological/psychological effects led to its application in behavioral outcomes, like using pink to calm aggression in institutional settings.

In marketing, understanding consumer color preferences is crucial for product design and color selection. Trent (1993) noted that marketers who discern which colors sell best can optimize product lines and reduce production costs. Triplett (1996) identified a trend in the continuous update of color selections, with industries like automotive making significant color changes annually and consulting color experts years in advance (Triplett, 1995b). Yet, consumer color preferences for specific product categories, especially in high-risk purchases, can be volatile. Recognizing these factors in color selection can prevent wasted effort in following fleeting trends.

The theory that color preferences form through associations holds significance for marketing. For instance, a study on Pentel by Rouland (1993) revealed that green and red were unpopular in school supplies due to their association with grading, causing adverse reactions in students. Marketers can leverage these associations to create brand images or meanings for certain colors, like Owens Corning using pink to brand their fiberglass insulation and associating it with being modern and stylish through the Pink Panther mascot. Defining color associations can be challenging as they are often complex, suggesting that marketers might benefit more from creating and controlling new color associations

Gender affects buying behavior of consumers

Pryzgoda & Chrisler, (2000: 554) has mention in their article, gender uniqueness is closely connected to "biological sex" and "gender" is a different concept. Although biological sex states the biological aspects of being female and male, gender denotes the psychological, social and behavioral characteristics of females and males. Therefore, Gender identity is conceptualized as existential femininity or masculinity of individuals (Spence, 1984: 83). There were research studies on the gender inclination towards the things that shows that there are discernible variations in what ways men and women behave as shoppers.

It's clear, men and women suppose otherwise concerning looking and can approach the act of shopping in numerous ways. Males and females wish to tally different merchandise and that they are probably to own alternative ways of feeling and getting these (Mitchell and Walsh, 2004). Gender has a crucial role in client behaviors, because, the variations between men and women concerning expectation, want, need, life-style and so on replicate to their consumption behaviors. Gender is often mixed with the term sex while pointing the difference between the two genders. But gender and sex are different. Sex-typed defines that the masculine or feminine characteristics. For instance a product like Barbies dolls pointing the characteristics of female gender and a product hot wheels for masculine characteristics of male gender. Gender distinction doesn't solely influence on-line motivation. It conjointly influences the categories of product that males and females value purchases. In a study, females purchased considerably more on attire (e.g., clothes, shoes and bags), health product, beauty products, toys, games, home accessories and garden accessories than male,(Sebastianelli,

Tamimi and Rajan2008). On the opposite hand, males purchased significantly more on component and code and electronic products.

Ekeng et al. (2012), found that biological sex had an effect on the consumers' instinct buying behavior and that females had more impulse buying behavior than males. The same has been supported by the study conducted by Khan et al. (2016) who inspected the effect of biological sex on generation Y consumers' impulse buying behavior for fashion apparel goods. Therefore, the outcome of the study was that biological sex affected generation Y consumers' impulse buying behavior for fashion apparel goods.

On the basis of above mentioned literature, certain research questions were framed to identify the particularly two aspects; one is an effects of color psychology while consumer purchasing and how marketers specifically draws the attention towards products, second selection of product and buying on the basis of gender identification.

3. Research Question

RQ-1: *How does color psychology affects buying behavior of consumers?*

RQ-2: *How does gender affects buying behavior of consumers?*

4. Research Methodology

a) Place of data collection and sampling

The data was collected from Dehradun city, Uttarakhand using street intercept method from 15 July to 16 August, 2021.

b) Target Population

The target population was youths residing in the Dehradun city and purchasing apparels for themselves as a part of their routine life style.

5. Data Analysis

5.1.Demographic Information

Table 1 Showing demographic information		
Gender	**Male** **Female**	**214** **171**
Age (years)	**18-21** **22-25**	**245** **116**
Marital status	**Married** **Unmarried**	**00** **361**
Education	**Under - graduate**	**361**
Occupation	**Student**	**361**
Household income	**15000-30000** **31000-45000** **46000-60000** **61000-75000** **More than 75000**	**87** **177** **49** **33** **15**

5.2.Data Normality

The significant values of Kolmogorov-Smirnovin Table 2 for all variables (Sig.) is less than 0.05 which states that the variable is normal and is fit for further analysis

Table 2

Test of Normality

	Kolmogorov-Smirnov		
	Statistic	df	Sig.
Pro1	.253	385	.000
Pro2	.261	385	.000
Pro3	.258	385	.000
Pro4	.253	385	.000
Pri1	.276	385	.000
Pri2	.256	385	.000
Pri3	.266	385	.000
Pla1	.256	385	.000
Pla2	.265	385	.000
Pla3	.244	385	.000

Pr1	.241	385	.000
Pr2	.251	385	.000
Pr3	.257	385	.000
Peo1	.255	385	.000
Peo2	.273	385	.000
Peo3	.264	385	.000
PE1	.271	385	.000
PE2	.242	385	.000
PE3	.231	385	.000
Proc1	.261	385	.000
Proc2	.242	385	.000
Proc 3	.265	385	.000
BB1	.256	385	.000
BB2	.270	385	.000
BB3	.265	385	.000

Source: Primary data

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5.3.Reliability Analysis

Table 3 shows that there are no missing variables and the data set contain exactly 385 responses for all variables and contain no missing variables.The value of Cronbach's Alpha is greater than 0.50 i.e. 0.914 which states that the reliability of the whole questionnaire is 91.40% i.e. if same set of respondents fill the questionnaire at different point of time then the consistency will be 91.40% (Refer the table 4).Further, the value of Cronbach's Alpha for all the constructs of Service-mix was measured; it indicated the value of Cronbach'salpha as- 0.618, 0.548, 0.562, 0.587, 0.572, 0.598, 0.509 and 0.566. It states that the reliability for every item of questionnaire (i.e. Color Psychology of Product, Color Psychology of Price, Color Psychology of Place, Color Psychology of Promotion, Color Psychology of People, Color Psychology of Physical Evidence, Color Psychology of Process and Buying Behaviour) is acceptable and the data is fit for further analysis. (See the table 5).

Table 3

Case Processing Summary

		N	%
Cases	Valid	385	100.0
	Excluded	0	.0
	Total	385	100.0

Table 4
Reliability Analysis

Cronbach's Alpha	N of Items
.914	25

Table 5
Reliability Analysis

Constructs	No of items	Cronbach's alpha
Color Psychology of Product	4	0.618
Color Psychology of Price	3	0.548
Color Psychology of Place	3	0.562
Color Psychology of Promotion	3	0.587
Color Psychology of People	3	0.572
Psychology of Physical Evidence	3	0.598
Color Psychology of Process	3	0.509
Buying Behaviour	3	0.566

Source: Primary Data

5.4.Measurement model

5.4.1. Measurement Model Fit Summary

Table 6a
Measurement Model Fit Summary

CMIN/DF	1.534
GFI	0.940
NFI	0.981
CFI	0.945
RMSEA	0.037
P-Value	0.000

5.4.1.1.Convergent validity

Table 6b
Convergent validity

Sr. no	Codes	Service - Mix factor Constructs						
		Product Psychology	Price Psychology	Place Psychology	Promotional Psychology	Psychology of People	Psychology of Physical Evidence	Psychology of Process
1.	Pro 1	.56						
2.	Pro 2	.48						
3.	Pro 3	.56						
4.	Pro 4	.54						
5.	Pri 1	---	.52					
6.	Pri 2	---	.57					
7.	Pri 3	---	.52					
8.	Pli1	---		.54				
9.	Pla2	---		.54				
10.	Pla3	---		.56				
11.	Pr1	---			.60			
12.	Pr2	---			.58			
13.	Pr3	---			.52			
14.	Peo1	---				.59		
15.	Peo2	---				.51		
16.	Peo3	---				.56		
17.	PE1	---					.51	

18.	**PE2**	---					**.55**	
19.	**PE3**	---					**.66**	
20.	**Proc1**	---						**.53**
21.	**Proc2**	---						**.50**
22.	**Proc3**	--						**.49**
Average Variance Extracted (in %) *		**53.5**	**54.0**	**55.0**	**57.0**	**55.3**	**57.3**	**51.0**
Construct Reliability **		**.78**	**.61**	**.75**	**.62**	**.74**	**.74**	**.75**

Source: Primary Data

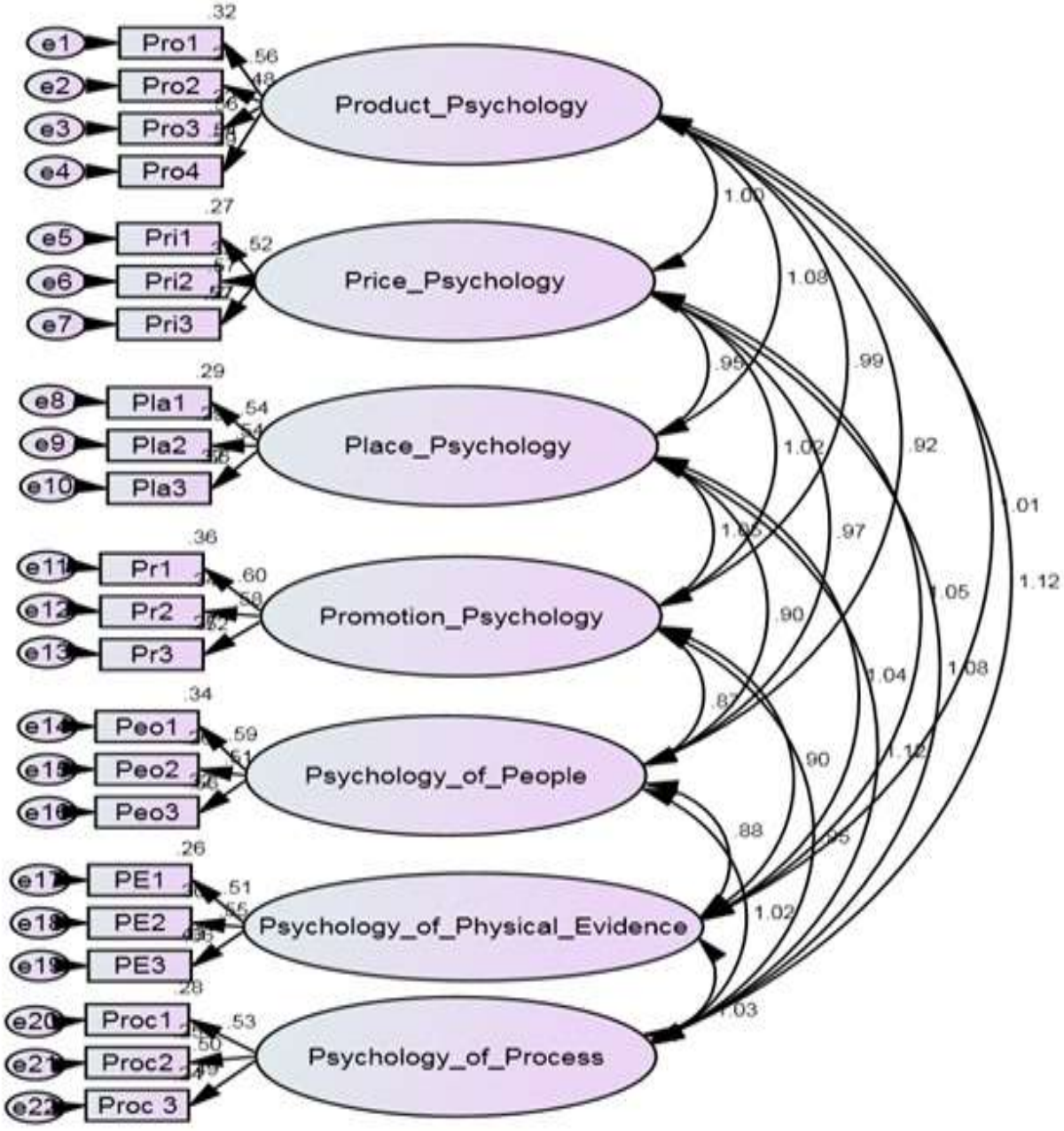
5.4.1.2 Discriminant validity

Table 6c
Discriminant validity

Service-Mix Constructs	Average Variance Extracted	Service-Mix Constructs						
		Product Psychology	Price Psychology	Place Psychology	Promotional Psychology	Psychology of People	Psychology of Physical Evidence	Psychology of Process
		Squared inter-construct correlation of all the constructs for the comparison with AVE						
Product Psychology	**.53**	**1**	**.343****	**.404****	**.357****	**.295****	**.368****	**.395****
Price Psychology Place	**.54**	.586**	**1**	**.272****	**.341****	**.295****	**.366****	**.340****
Place Psychology	**.55**	.636**	.522**	**1**	**.355****	**.249****	**.352****	**.354****
Promotional Psychology	**.57**	.598**	.584**	.596**	**1**	**.253****	**.294****	**.267****
Psychology of People	**.55**	.544**	.544**	.499**	.503**	**1**	**.259****	**.302****
Psychology of Physical Evidence	**.57**	.607**	.605**	.594**	.543**	.509**	**1**	**.310****
Psychology of Process	**.51**	.629**	.582**	.595**	.517**	.550**	.557**	**1**

Source: Primary Data

Fig 1- Confirmatory Factor Analysis



5.5 Structural equation model for effect of color psychology on buying behavior of consumers

5.5.1 Structural model fit summary

Table 7a
Structural Model Fit Summary

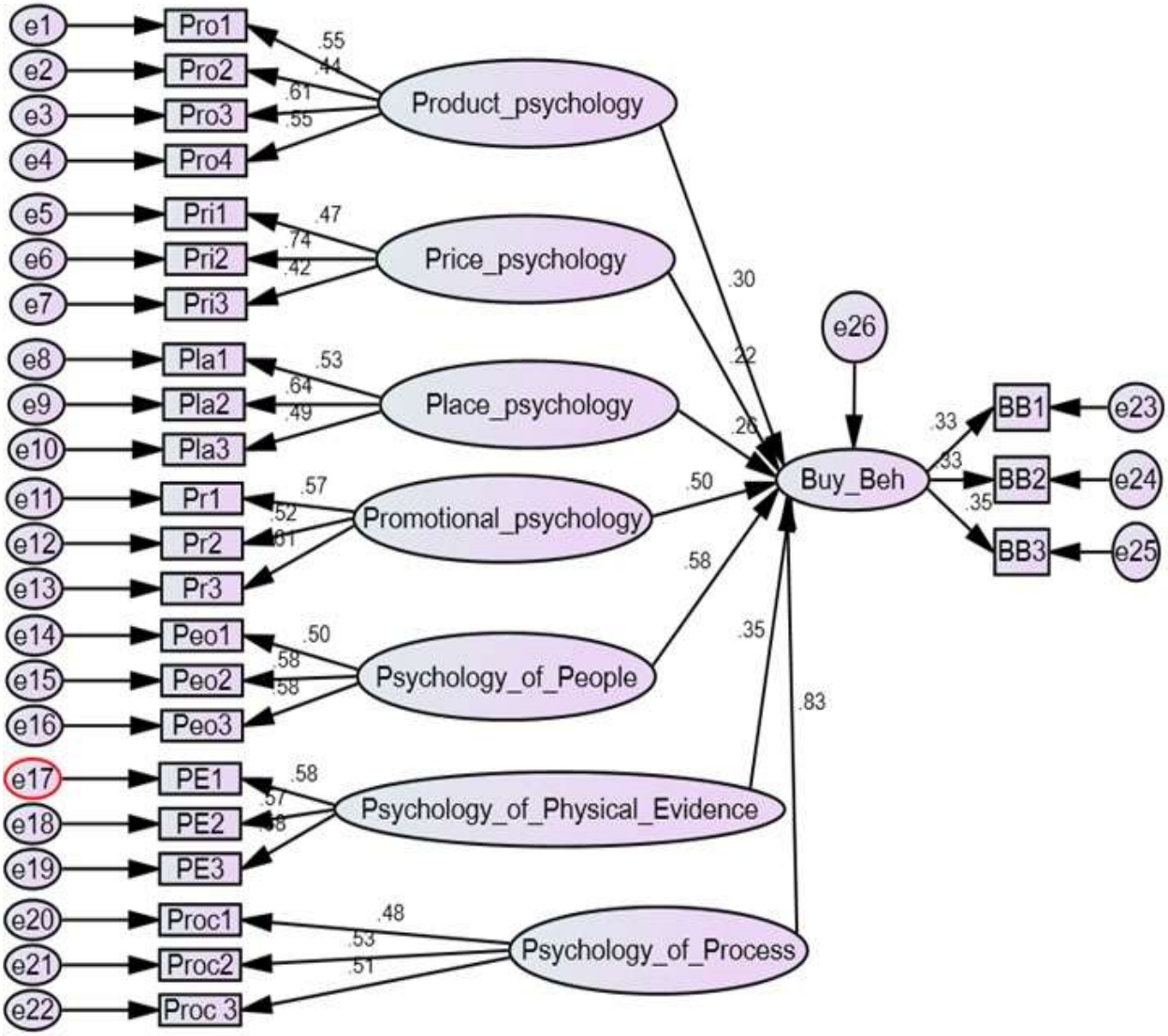
CMIN/DF	1.698
GFI	0.922
NFI	0.988
CFI	0.920
RMSEA	0.022
P-Value	0.000

Table 7b
Effect of color psychology on buying behavior of consumers

Path of causal relationships			**Estimate**	**P**
Buying Behaviour	<---	Product Psychology	.298	.081 Insig
Buying Behaviour	<---	Price Psychology	.225	.136 Insig
Buying Behaviour	<---	Place Psychology	.261	.109 Insig
Buying Behaviour	<---	Promotion Psychology	.500	.004 Sig
Buying Behaviour	<---	Psychology of People	.584	.001 Sig
Buying Behaviour	<---	Psychology of Physical Evidence	.352	.039 Sig
Buying Behaviour	<---	Psychology of Process	.829	*** Sig

Source: Primary Data

Fig 2- Structural Equation Model



5.6 Independent sample t-test

The significant value i.e. Sig. (2-tailed) is more than 0.05 which states that there exist similar responses from between males and females regarding consumer buying behavior**.**

Table 8a

Group Statistics

	Gender	N	Mean	Std. Deviation
BB1	Male	214	3.6215	1.32923
	Female	171	3.4912	1.35199
BB2	Male	214	3.6168	1.36106
	Female	171	3.5673	1.32393
BB3	Male	214	3.3692	1.39724
	Female	171	3.5614	1.39348

	Gender	N	Mean	Std. Deviation
BB1				
BB2				

Table 8b
Independent sample t-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
BB1	Equal variances assumed	.160	.690	.948	383	.344	.13027	.13738	-.13985	.40038
	Equal variances not assumed			.946	361.775	.345	.13027	.13764	-.14041	.40095
BB2	Equal variances assumed	.404	.525	.359	383	.719	.04957	.13793	-.22162	.32076
	Equal variances not assumed			.361	368.576	.719	.04957	.13750	-.22082	.31996
BB3	Equal variances assumed	.792	.374	-1.343	383	.180	-.19224	.14315	-.47369	.08921
	Equal variances not assumed			-1.343	364.901	.180	-.19224	.14310	-.47365	.08916

Source: Primary Data

6 Results and discussions

Hence structural equation model shows as follows-:

There is a significant positive relationship between Psychology of Product and consumer buying behavior.

There is a significant positive relationship between Psychology of Price and consumer buying behavior.

There is a significant positive relationship between Psychology of Place and consumer buying behavior.

There is a significant positive relationship between Psychology of Promotion and consumer buying behavior.

There is a significant positive relationship between Psychology of People and consumer buying behavior.

There is a significant positive relationship between Psychology of Physical Evidence and consumer buying behavior.

There is a significant positive relationship between Psychology of Process and consumer buying behavior.

Therefore the above finding suggests that there exist a positive relationship between color Psychology and consumer buying behavior.

There is no effect of gender on consumer buying behavior i.e. males and females fetch similar responses towards consumer buying behavior for appearels regarding color psychology.

References

1. Maria Carine Cases and Justine Chinoperekweyi (2019) ,Color psychology and its influence on consumer buying behavior: A case of apparel products, Saudi Journal of Business and Management studies, vol -4. pp 440 447
2. Girard, J. (2018). Visual Color Symbolism Chart by Culture. [online] Thought Co. Available at: https://www.thoughtco.com/visual-colorsymbolism-chart-by-culture-4062177 [Accessed 10 Mar. 2018]
3. Lamancusa, K. (2016). Emotional Reactions to Color. Creative Latitude. Seattle: Phoenix
4. Bailey, F. G. (2018). Stratagems and spoils: A social anthropology of politics. Routledge.
5. Davis, S. (2000). Color Perception. New York: Oxford University Press, 15-20.
6. Wright, R. (2004). The color affects system of color psychology. Color Research and Application. 29:381-389
7. Kleijnen, J., de Crean, A. J., Roos, P. J., & Leonard de Vries, A. (1996). Effect of color of drugs: Systematic Review of perceived effect of drugs and of their effectiveness. Lancet: PubMed
8. Keller KL, Lehmann DR (2006). Brands and Branding: Research Findings and Future Priorities. Mark. Sci., 25(6): 740-759.
9. Schmittm B., Simonson A. (1997). Marketing Aesthetics. Free Press. Shirley Willet Color Codification, http://home.earthlink.net/~smwillett/colorofemotions.html
10. Gob'e M (2001). Emotional Branding: The New Paradigm for connecting Brands to People. Allworth Press.
11. Perry A., Wisonm D. (2003). Before the Brand: Creating the Unique DNA of an enduring Brand Identity. McGraw-Hi
12. Derek, H.(2011)."Perceptual pairing of color and motion". Vision Research 45. 3015–3026.
13. Crowley, A. E. (1993, Jan). The Two-Dimensional Impact of Color on Shopping. Marketing Letters, Vol. 4, No. 1 , pp. 59-69.
14. Kotler, P., & Keller, K. L. (2006).Marketing Management. New Jersey: Prentice Hall International
15. Bin ,S.andYulan, W.and Chris, K.Y. Lo. andMomoko, S(2012)." The impact of ethical fashion on consumer purchase behavior". www.emeraldinsight.com/1361-2026.html
16. Luscher, M.andscott, I (2003), "The Luscher color Test, Random House, Newyork, Ny
17. Trent, L. (2000). "Color can affect success of products", Marketing New s, vol.27, July, p.4.
18. Aslam, M. M. (2006). Are you selling the right color? A cross-cultural review of color as a marketing cue. Journal of Marketing Communications, 12(1), 15–30.
19. Silayoi, P., & Speece, M. (2007). The importance of packaging attributes: A conjoint analysis approach. European Journal of Marketing, 41(11/12), 1495–1517.
20. Singh, S. (2006). Current research development: Impact of color on marketing. Management Decision, 44(6), 783–789.

21. Funk, D., &Ndubisi, N. O. (2006). Color and product choice: A study of gender roles. Management Research News, 29(1/2), 41–52.
22. Prinsloo, N., Merwe, V. D., Bosman, M., & Erasmus, A. (2012). A critical review of the significance of food labeling during consumer decision making. Journal of Family Ecology & Consumer Sciences, 40, 83–98.
23. Sun, C., Adhikari, K., & Koppel, K. (2015). An exploratory study of the factors that may affect female consumers' buying decision of nail polishes. Cosmetics, 2(2), 187–195.
24. Gofman, A., Moskowitz, H. R., & Mets, T. (2010). Accelerating structured consumer-driven package design. Journal of Consumer Marketing, 27(2), 157-168.
25. Bubl, E., Kern, E., Ebert, D., Bach, M., & Van Elst, L. T. (2010). Seeing gray when feeling blue? Depression can be measured in the eye of the diseased. Biological psychiatry, 68(2), 205-208
26. Fairchild, M. D. (2013). Color appearance models. NY: Wiley Press
27. Hemphill, M. (1996). A note on adults' color–emotion associations. The Journal of genetic psychology, 157(3), 275-280.
28. Whitfield, T. W. A., & Wiltshire, T. J. (1990). Color psychology: A critical review. Genetic, Social & General Psychology Monographs, 116(4), 387.
29. Jung, C., Neumann, E., &Liebscher, M. (2015). Analytical Psychology in Exile. Princeton: Maria Carina Casas & Dr. Justine Chinoperekweyi ; Saudi J Bus Manag Stud, May 2019; 4(5): 441-456 © 2019 Press, 60-70. 16.
30. Riley, C. A. (1995). Colore Codes: Modern Theories of Color in Philosophy, Painting, and Architecture, Literature, Music, and Psychology. Hanover: University Press of New England, 306-310.
31. Machleit, K. A., &Eroglu, S. A., (2000). Describing and Measuring Emotional Response to Shopping Experience. Journal of Business Research, vol. 49, 101-111.
32. Donovan R.J. and Rossiter J.R., 1982. "Store Atmosphere: An Experimental Psychology Approach", Journal of Retailing 58 (Spring), p34-57.
33. Sherman, E., Mathur, A., & Smith, R. B., (1997). Store Environment and Consumer Purchase Behavior: Mediating Role of Consumer Emotions. Psychology & Marketing, vol. 14, n° 4, 361-378.
34. Mehrabian A. and Russel J.A., 1974."An Approach to Environmental Psychology", MIT Press, Cambridge, MA.
35. Babin, B. J., &Attaway, J. S., (2000).Atmospheric Affect as a Tool for Creating Value and Gaining Share of Customer. Journal of Business Research, vol. 49, 91-99.
36. Gröppel-Klein, A., (1998). The Influence of the Dominance Perceived at the Point-of-Sale on the Price-Assessment. European Advances in Consumer Research , vol. 3, 304-311.
37. Beach L. R., Wise B. K. & Wise J. A., (1988). The Human Factors of Color in Environmental Design: A Critical Review. Nasa Report n° NASA CR-177498 Washington, DC: National Aeronautics and Space Administration.
38. Valdez, P., (1993). Emotion Responses to Color.Unpublished Doctoral Dissertation. Los Angeles: University of California.
39. Valdez P. and J. Mehrabian, 1994. "Effects of Color on Emotions", Journal of Experimental Psychology: General, 123, 4, p394-409
40. Wilson. Glenn D. (1966). "Arousal Properties of Red Versus Green." Perceptual and Motor Skills 23.947-949.
41. Pavey. Donald. (1980). Color. Los Angeles: Knapp Press.
42. Trent, L. (1993), "Color can affect success of products", Marketing News, Vol. 27, July, p. 4

43. Triplett, T. (1995b), "Carmakers driven by quest to find tomorrow's color", Marketing News, Vol. 29 No. 18, August 28, pp. 38-9.
44. Triplett, T. (1996), "Automotive color trends for new millennium", Marketing News, Vol. 30 No. 20, September 23, pp. 20-1.
45. Rouland, R.C. (1993), "What colors are your school supplies?", Direct Marketing, March, pp. 60-2
46. Heather Kraft and J. Michael Weber.(2012). A Look at Gender Differences and Marketing Implications, International Journal of Business and Social Science,3(21),247-253.
47. Sebastianelli, R., Tamimi, N., &Rajan, M. (2008). Perceived quality of online shopping: Does gender make a difference? Journal of Internet Commerce, 7(4), 455-469. doi: 10.1080/15332860802507164.
48. Pryzgoda, J., &Chrisler, J. C. (2000). Definitions of gender and sex: The subtleties of meaning. Sex Roles, 43(7/8), 553- 569.
49. Spence, J. T. (1984). Masculinity, femininity and gender-related traits: A conceptual analysis and critique of current research. Progress in Experimental Personality Research, 13, 1-97.
50. Ekeng, A. B., Lifu, F. L., &Asinya, F. A. (2012). Effect of demographic characteristics on consumer impulse buying among consumers of Calabar Municipality, Cross River state. Academic Research International, 3(2), 568-574.
51. Khan, N., Hui, L. H., Chen, T. B., & Hoe, H. Y. (2016). Impulse buying behaviour of generation Y in fashion retail. International Journal of Business and Management, 11(1), 144-151.