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Colors of Mind Determines Colors of Choice – Pakistani Consumer Behavior

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Abstract

Color is a key factor in influencing consumer purchase decisions; it helps in visualizing products in the minds of the end-users. Color is an excellent medium used for influencing consumer perceptions of a brand and determining their buying preferences. The aim of the study was to investigate if color would have an impact on consumer purchasing decisions, how color might help people remember brands better, and whether there might be gender differences in color preferences. The research also investigated if the weather influenced consumers' decisions, as well as differences in color kinds and preferences and socio-cultural influences. Using convenience sampling, a 26-item questionnaire was administered to 462 males and females in the age range of 15 to 46 years and above. The questionnaire was tested with reliability, validity, and exploratory factor analysis (EFA), established as a reliable instrument. Hypotheses were tested using variance coefficients for linear regression and mean difference calculations. The resulting values indicate the existence of significant relationships and notable gender disparities. The model's fit was moderate, indicating adequate predictive accuracy. The findings concluded that there was a considerable gender difference in Pakistani consumers' color choices. Consumers' evolving requirements and desires are also linked to cultural, gendered, and personal preferences/differences. These findings would help marketers/advertisers to increase consumer interest in their products/services through the use of color and keep color as an important factor in brand recall through packaging.

Keywords: *brand recall, color psychology, consumer attitude, emotions & perceptions, Pakistani consumer buying behavior.*
JEL Code: M30

1. Introduction

Color has been ascertained to influence human behavior. Color has a profound effect on perceptions, emotions, and bodily reactions. In marketing and branding, color has proven to be a potent tool for conveying ideas. It's been proven that color therapy improves the wellness of our thoughts and bodies. It has also been demonstrated to make people more contented (Times of India, 2019). Kimmel (2018) quipped that the

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'psychology of color' is the consumers' choice of color and how it connects to what the consumer desires. A person's likes and dislikes, along with his emotions and moods change with time (Casas & Chinoperekweyi, 2019). In addition, the product's color was heavily influenced by the environment and the product category. As a result, certain hues are dependent on the surrounding environment (Kotler & Armstrong, 2018). A product's color palette is chosen depending on how the intended audience perceives and interprets those hues when branding, packaging, and advertising the product.

There are still more mysteries about the psychology of color and how it affects consumers' behavior, necessitating research to identify the possible influences on their decision-making. Hemphill (1996) noted that colors carry significant relevance in the consumers' buying intention with a studied practice of 85% being the reason that an individual chooses to acquire a product. External elements such as the media, promotional methods, commercials disposition, cultural norms, weather conditions, etc., can help shift a consumer's perception of a product (Girarad, 2019).

Consumers' decisions are influenced by the brand recall at the time of purchasing; brands that use vibrant colors creates a positive mood and enliven the spirit of consumers and hence generate a greater brand recall (Kumar, 2017). Colors that are linked to the consumers' ethnicity and cultural association result in higher brand recall at the time of purchasing (Danilwan & Pratama, 2020).

Dalgin et al. (2018) found a gender disparity in marketing techniques tied to subjective choices. Certain colors are more appealing or repulsive to different genders than others. A person's mood, decisions, and personality are all reflected in their choice of color as well as the connection that color has to a certain brand (Yu et al, 2017). Color, packaging, and graphic design along with effective promotional strategies contribute to product branding and the overall branding and marketing process (Blaszczyk & Spiekermann, 2017; Chitturi et al., 2019). Off-color palettes diminish the brand's energy and liveliness, making it less attractive to the consumers. Consumers' perception is influenced by the appropriate application of the color palette (Martinez et al, 2021), especially product quality (Pathare et al., 2013).

The current study delves into the role of color in shaping consumers' purchasing decisions and aspires to enhance understanding of color preferences between genders, the influence of varying color temperatures on buying decisions, and the interplay of color, socio-cultural norms, and weather conditions. Color psychology has been found to play a significant role in marketing and brand creation. Small businesses need to focus more on the impact of color or they may continue to struggle in today's highly competitive economy. With this perspective, the study looks at how color affects consumer recall of a brand's name, how gender differences in color preferences exist in Pakistani landscape. Empirical studies have established that marketing and product

development efforts should prioritize color psychology. Therefore, this study aims to examine the impact of color on consumer purchasing behavior to inspire product entrepreneurs to incorporate color psychology into their brand development plans.
The study also seeks to unravel the connections between color, socio-cultural norms, and weather conditions in influencing consumers' product color choice By doing so, it hopes to provide valuable insights to multinational and local businesses, steering their marketing and product development strategies towards more effective utilization of color psychology within the cultural boundaries. The larger objective is to inspire product entrepreneurs to adopt a more authentic approach to marketing and brand development by focusing on usage of color psychology in the context of Pakistani consumer behavior.

The underlying questions and goals of this study are integrated into its overall objective, which encompasses a wide range of research questions. Does color influence the purchasing decisions of Pakistani consumers? Does color facilitate brand recall? If there exists a significant difference between genders' color preferences? Is there an important distinction between the effects of cold, radiant, and subdued colors on consumer purchasing decisions? Do color and sociocultural norms influence the purchasing decisions of consumers? Does the atmospheric condition influence the color selection of a product? These inquiries enable us to comprehend the influence of color psychology on consumer behavior and assist businesses in utilizing this knowledge effectively.

The study investigates the relationship between color and sociocultural expectations in consumer buying choices, presenting greater awareness of how traditional and societal variables can impact color preferences. In addition, it investigates the often-overlooked role of meteorological conditions in determining the color of a product. This research's findings can assist businesses, brand analysts, and product developers in suggesting effective marketing campaigns and brand-colors that align with consumers' color preferences and purchasing habits of Pakistani consumers. Therefore, this manuscript not only advances academic comprehension in the fields of color and consumer psychology, but it also provides industry practitioners with practical implications.

2. Literature review

The domain of color psychology investigates how color affects our perceptions of reality. Color psychology is a paradigm for determining how and why we react to various shades of color (Patil et al., 2022). Color psychology is the practice of influencing the imagination by using different hues to trigger emotional responses, thoughts, and experiences. Colors may influence each of us differently in our unique experiences or present moods. However, color psychology is a valuable guide for creating visuals that engage with individuals in a particular way. Color theory aims to

understand how color affects the human psyche when paired with real-world objects (Song, 2022).

Shopping is a social activity that has penetrated our societal norms and practices. It is an activity people bond over or find solace when they are not feeling up to par commonly called shopping therapy. Such behavior is induced through a structured consumer decision making process through which they select and consume a product. The process begins with individual procuring information about the product in the market and choosing between alternatives (Casas & Chinoperekweyi, 2019; Kumar, 2017). The decision-making process is influenced by a range of internal & external factors such as consumers' preferences build from their perception, personality, culture, emotions, and seller-controlled variables such as price, quality, efficacy, availability etc. Since one of the foremost aspects of a product when looked at is *color*, the researcher aims to identify that when consumers decide to buy a product, its color is one of the determinants. Therefore, it is hypothesized as:
H1 - Color influences Pakistani consumer buying decisions.

Using the association theory and colors interpretations, brands develop strategic campaigns to attract their consumers (Bush, & Hunt, 2011; Javed & Javed, 2015). To strengthen positive brand association marketers, consider the global consumer culture (Chen et al., 2013; Kauppinen-Räisänen, 2014; Zheng & Li 2018). For example, the blue brand color of Unilever's Pureit water purifier emphasizes the product's promise of clean and pure water (Rangan & Sinha, 2011). Cheetos, a popular snack made by Frito-Lay are puffs of cornmeal that taste like cheese. With a mix of red, orange, and yellow colors, the package shows a tiger breathing fire. This sends a clear message that the product will be hot and spicy. (Abbasi, 2017). The use of black or white iPhone boxes in a similar way shows that the iPhone brand is about luxury and power, and that iPhone users live a high-end and exclusive lifestyle (Lo et al, 2018). A brand color which is associated with something bad will damage consumers' retrieval behavior (Casas and Chinoperekweyi, 2019).

Brand recognition is the extent to which a consumer can identify the brand correctly using visual cues like logo, colors, shapes etc. The key is consistency i.e., homogeneity in the shapes & colors used by the brand, so consumers can form patterns to connect and hence recognize. Color helps in increasing the brand recognition to about 80% (Morton, 2013; Tantanatewin & Inkarojrit, 2016). Amongst a sea of different products, successful color manipulation enables companies to stand out and sell their products with an added advantage (Lee et al., 2018). For instance, Heinz established winning brand recognition by using red color and introduced a variation of their regular ketchup that was green in color. Such intense deviance from "deep-red ketchup bottles" boosted sales by twenty-three million dollars (Taylor et al., 2015). The selection of color does not only establish brand recognition, but it too expresses the brand image. In general, consumers make an abrupt initial judgment

regarding the product within 1.5 minutes of interaction, while around 62 – 90% decide based on color. The consumers instigate to relate the company with certain individualities constructed solely on color of logo even without initial experience with that product (Chang & Lin, 2010). Kim Kardashian West (a multi-billion-dollar cosmetics line) associated itself with the color beige which signifies minimalism in makeup (Haleblian, 2019). A study on brands like IBM, Hermes, Starbucks, and Coca-Cola research shown that consumers associate the red in Coca-Cola with youth, brilliance, energy, and happiness. Whereas the red in Hermes represents courage, ego, & uniqueness; the green in Starbucks as leisure, calm, comfort, and youth; the navy blue and black in IBM with reliability, professional, novelty and trustworthiness (Chang & Lin 2010). A consumer's experience with a brand can be a major determinant of the brand's perceived value which further influence their buying choices (Xixiang et al., 2016).

Companies choose colors strategically to express certain emotions and product quality; the red and yellow in McDonald's, Burger King and Burger Lab's signify speed & energy; consumers interpret that their service is fast and efficient (Shi, 2013). If we look at Pakistan's tetra pack milk category, the brands have established themselves with colors as differentiating factor: red for Olpers, blue for Haleeb, green for MilkPak and white for GoodMilk (Qahar, 2018). Frozen food brands like Menu and PK use green for their logos and packs to promote that their products are made with natural organic ingredients (Arifeen, 2012). This leads to formulation of the hypothesis as:
H2 - Color facilitates brand recall.

Color associations have been found to entail a dependency on consumers' demographics. For instance, several color shades represent different types of personalities of the consumers (BYTYÇI, 2020). Clearance sales and fast-food restaurants utilize stimulating colors such as yellow, orange, red, and black to induce insistence (Tantanatewin & Inkarojrit, 2018). Similarly, the retail stores and coffee lounges use combinations of light pinks and blues to induce calmness, so consumers have a leisurely and soothing experience (Kolobarić, 2020). Certain brands are more recalled and recognized by their (brand) colors e.g., Coca-Cola (red), McDonald's (yellow), Surf Excel (orange + blue). Color works as a differentiation element as the brain prefers recognizable brands (Cunningham, 2017). The 'isolation effect' works for brands as brands are remembered if they stand out like a sore thumb (Pick, Sweeney & Clay, 1991).

Hallock's work on 'color assignment' specifies gender differences in relation to color psychology. Men usually prefer bold colors whereas women prefer softer (Hallock 1999 as cited by Ciotti, 2014). Ciotti debated that brands who break the typical gender-color stereotyping has found to be rewarded in terms of brand recall and preferences. Women prefer more subtle and cool colors as compared to men (Javed &

Javed 2015). Studies have revealed that women are more likely to be sentimental and thoughtful consumers than men as they are more decisive, rational and methodical (Feng et al., 2023; Lee, Sun, Chen, & Jhu, 2015). Women are more influenced by social media and online reviews though both gender value accessibility & pricing in online purchases (Kanwal et al., 2022). Therefore it is hypothesized as:
H3 - There is a difference between genders on color preferences between Pakistani consumers.

Color has three basic properties: Value, Saturation, and Hue – their variations could lead to an upward or downward effect on mood, cognition (perception) and attitude (Simmonds & Spence 2017). Together, the three dimensions define how users recognize colors and thus the connotations related to them. Hue is defined as the color's wavelength that defines its labels, e.g., yellow or red. However, saturation defines the pigmentation or intensity of color, whereas a value indicates the brightness of color (Elliot & Maier, 2014).

The color green indicates nature by inducing calmness, relaxation, and positive feelings; the blue color is associated with water and elicits cleanliness, purity and comfort. Red color is related to love, anger and fire and portrays domination. The color black exhibits power and luxury, yellow with happiness, and purple with authority (Naz & Epps, 2004). The higher the saturation the stronger the intensity of the aroused feeling and higher the value, it is perceived more positively, though few colors possess greater association than other colors (Labrecque et al., 2013). Based on the earlier studies, hypothesis formulated as:
H4 - There is a difference between cool, warm, and neutral colors consumer buying decision.

Consumer's decision making is dictated 95% by the subconscious mind, and 5% is rational (Eiseman et al., 2015). Color is the most preliminary characteristic of a product, hence can be manipulated in a few ways to stimulate the consumers (Patil, 2012). Choosing the appropriate colors to elicit a desired emotional response from consumers might lead to a greater desire to purchase the product from the consumer. The unconventionality of a certain color of clothing for a specific occasion can still attract consumers. Apparel firms generally base their designs and color schemes on weather, surroundings, and culture. Acculturation in that market has resulted in a shift in apparel patterns. Acculturation is becoming more common in many countries throughout the world as the number of immigrants continues to rise. Apparel firms, therefore, make attire that appeals to both indigenous and non-indigenous consumers. As a result of this, the company's products will appeal to the company's target audience, which is made up of immigrants from other countries (Stillman et al., 2020). Based on this argument, postulated hypothesis is:
H5 - Color and socio-cultural norms determine consumer buying decisions.

Empirical evidence establishes that weather affects consumer spending patterns of consumers. Extreme weather restricts consumers in homes so shopping and retail outlets walk-ins decline (Parsons, 2001). On the other hand, particular weather conditions like hot weather may again see a change in consumer buying behavior. Interestingly, weather influence consumers' internal state and hence found to determine their buying preferences. For e.g. sunlight has found to increase consumer spending (Murray et al., 2010). Variations in consumer spending patterns have been seen as a response to different temperatures and weather conditions (Parker & Tavassoli, 2000). Based on these findings, we predict that:
H6 - Color choice is determined by the weather conditions.

3. Method

The quantitative approach via a questionnaire-based survey was used (Abutabenjeh & Jaradat, 2018; Brown & Opie, 2019).

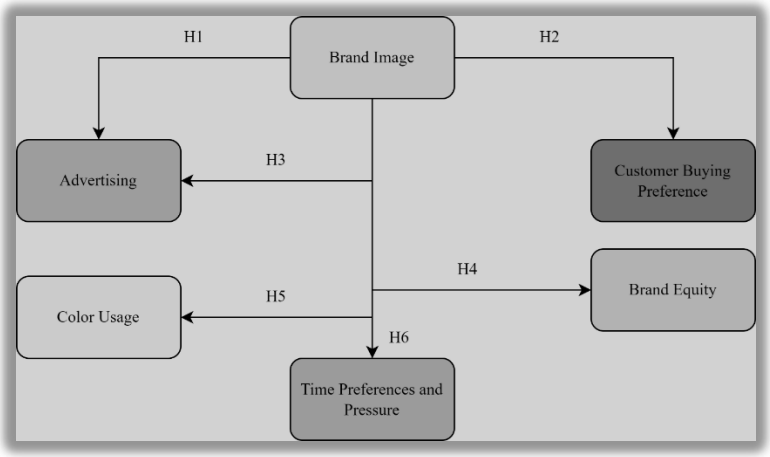

Figure 1: Research Model

3.1 Participants

Using convenience sampling method, a total of 490 responses were collected through google form (Loomis, 2018). Twenty-eight forms were found with incomplete information hence discarded, leaving 462 responses for data analysis (Berndt, 2020). Detailed profiling of participants is provided in result section.

3.2 Procedure

The data was collected using google form, participants were approached through email, social media platforms and applications. Starting the questionnaire with a consent form, they were then requested to fill the demographic information and then proceed to the main questionnaire. Lastly, they were thanked for their contribution in the study.

3.3 Measures

A consent form was presented assuring participants of confidentiality of the information provided. Participants were briefed about the objectives of the study and their right of withdrawal, and that no physical & psychological harm would be intended. The demographic details sought were age, gender, education, profession, total household income, marital status, and approx. physical & online shopping ratio.
The questionnaire was an adapted tool, having 25+1 items. Response category was a five-point Likert scale from strongly disagree to strongly agree; except one item which took color choice through a water bottle picture. The questionnaire was adapted from previous research with the consent of the authors (Rathee & Rajain, 2019).

4. Results

Table 1 provided the demographic profiling of the participants.
Table 2 displays descriptive statistics (Means and SD) of the measure.
Table 3 shows exploratory factor analysis and factor loading of the measure and established that the model is moderately fit. Reported Cronbach alpha value on current sample is .851.

Exploratory factor analysis was used to examine the internal reliability of the measure. EFA gave further advantage of investigating whether color (main construct) was well represented by the 26-item questionnaire. KMO & Bartlett's values indicated the suitability of the data for EFA. The cumulative variance is 73.51 which is greater than the least accepted (60%) variance. The KMO measure was .916 and Bartlett's test of sphericity values were 5331.25 (df 325; Sig.000).

Table 4 confirms the presence of convergent validity within the data utilized for this study, as evidenced by the composite reliability values (all above 0.70). A higher CR implies that the items in the construct are highly correlated and measure the same underlying construct. AVE is not the only measure of convergent validity. For the General color influence, brand recall, and color preferences, AVE is below 0.5, indicating a limited amount of shared variance among the indicators compared to the measurement error. Composite Reliability (CR) is another common measure, and it is possible to have good convergent validity with a high CR even when AVE is low.

Table 5 investigates discriminate validity is used to analyze whether each variable has a distinctive and unique identity or not (Hair, 2014). According to Henseler et al. (2015), the square root should be higher than the squares of the correlation of each variable. According to Fornell Larcker Criterion, (Ab Hamid et al., 2017), the discriminate validity holds in the data. The SQRT of AVE is more than the correlation value so there is a discriminate validity present.

Table 6 displays coefficients of variance for linear regression with predictors (color, color hues, norms and weather) and dependent variables (purchase intentions &

decisions). The sign of coefficient indicates whether there is a positive or negative correlation between each independent variable (IV) and the dependent variable (DV). The study resulted in positive correlation values and are values are found significant, which means the mean of DV is likely to increase with the increase in IV value.

Table 7 exhibits summary and analysis of variance for linear regression. The R Square values are low which indicates that IV is not explaining much of the DV despite the variable significance. The model can again be described as moderately fit.

Table 8 shows mean difference for linear regression analysis where gender difference is established with reference to color preference. The *t*-value establishes that there is a statistically significant gender difference in terms of color preferences.

Table 9 provides a summary of hypotheses.

Table 1: Demographic profile of the participants

Variables		*f*	%
Gender	Male	183	39.6
	Female	279	60.4
Age	15 - 25 Years	246	53.2
	26 - 35 Years	88	19
	36 - 45 Years	71	15.4
	46 and above Years	57	12.3
Education level	Postgraduate	128	27.7
	Graduate	113	24.5
	Undergraduate	221	47.8
Profession	Retired/Service/Business	189	40.9
	Homemaker	54	11.7
	Student	219	47.4
Marital Status	Married	167	36.1
	Divorced/Separated/widow(er)	17	3.7
	Single	278	60.2
Total Household income	50k and less	83	18
	51k – 100k	95	20.6
	101k – 150k	96	20.8
	151k and above	188	40.7
Approx. ratio of online and physical buying	20:80	197	42.7
	30:70	131	28.3
	50:50	134	29
Color choice	Neutral	213	46.1
	Warm	61	13.2
	Cool	188	40.7

N=462

Table 1 shows demographic characteristics of 462 participants. Gender division was found to be 39.6% males and 60.4% females. with the majority 53.2% of participants fall under 15-12 years of age. 19% and 15% of the participants were in the age ranges of 26-35 and 36-45 years respectively. 47.8% were undergraduates, 24.5% were graduates and 27.7% were postgraduates.

There were 47.4% students, 40.9% were employed/running business or retired and 11.7% were homemakers. The majority (60.2%) of the participants were single, 36.1% married and only 3.7% were divorced/separated/widow.

Table 2: Descriptive Statistics of the measure

Item #	Mean	SD
1	3.98	1.01
2	3.96	0.88
3	3.99	1.07
4	4.20	0.96
5	3.30	1.22
6	3.75	1.09
7	3.88	1.05
8	3.72	1.00
9	3.89	1.01
10	3.72	1.04
11	3.65	1.06
12	3.79	1.08
13	3.62	1.05
14	3.59	1.04
15	3.27	1.11
16	3.19	1.14
17	3.27	1.19
18	3.80	0.98
19	3.34	1.18
20	3.70	1.02
21	3.83	0.94
22	2.64	1.23
23	2.64	1.18
24	3.27	1.27
25	3.59	1.12
26	3.24	1.27
Scale		

Table 3: Exploratory Factor Analysis of the measure

Item No.	*Initial Eigen Values					
	Total	% of variance	Cumulative %	**Value of Extraction Method	***Factor Loading	
1	8.96	34.47	34.47	.65	.70	
2	2.06	7.92	42.40	.61	.66	
3	1.90	7.34	49.74	.44	.69	
4	1.26	4.84	54.59	.57	.67	
5	1.13	4.35	58.94	.51	.70	
6	.89	3.42	62.37	.65	.64	
7	.85	3.28	65.65	.59	.71	
8	.84	3.25	68.90	.54	.70	
9	.71	2.76	71.67	.59	.38	
10	.70	2.71	74.38	.55	.62	
11	.67	2.58	76.96	.59	.60	
12	.60	2.33	79.29	.56	.73	
13	.56	2.17	81.46	.45	.49	
14	.52	2.03	83.50	.65	.50	
15	.44	1.72	85.22	.61	.65	
16	.42	1.63	86.86	.44	.59	
17	.42	1.62	88.48	.57	.58	
18	.40	1.56	90.05	.51	.52	
19	.39	1.50	91.55	.65	.86	
20	.37	1.44	93.00	.59	.76	
21	.34	1.32	94.32	.54	.71	
22	.33	1.28	95.60	.59	.52	
23	.31	1.21	96.81	.55	.60	
24	.28	1.10	97.92	.59	.67	
25	.27	1.06	98.99	.56	.71	
26	.26	1.00	100.00	.45	.81	
% variance						17.81
Cumulative variance						73.51
Kaiser-Meyer-Olkin measure						.91
Bartlett's test of sphericity						5331.25
df						325
Sig.						.000

(N= 462)

* Using Varimax Rotation Analysis Factor Loading for EFA

**Using Principal Components Analysis of the measure communalities

*** Factor loading of 26-items where Cumulative variance is 73.51.

Table 4: Convergent Validity

Label	Item#	λ	λ^2	$1-\lambda^2$	CR	AVE	SQRT(AVE)
General Color Influence	12	0.55	0.31	0.69	0.85	0.39	0.62
	13	0.63	0.40	0.59			
	14	0.67	0.45	0.54			
	15	0.59	0.35	0.64			
	16	0.71	0.50	0.49			
	17	0.69	0.48	0.51			
	18	0.63	0.39	0.60			
	20	0.50	0.25	0.74			
	25	0.58	0.33	0.66			
Brand Recall	1	0.78	0.61	0.38	0.82	0.44	0.66
	2	0.69	0.48	0.51			
	4	0.57	0.33	0.66			
	8	0.55	0.31	0.68			
	11	0.64	0.41	0.58			
	21	0.67	0.44	0.55			
Color Preference	5	0.66	0.43	0.56	0.76	0.40	0.64
	6	0.76	0.58	0.42			
	7	0.57	0.32	0.67			
	9	0.61	0.37	0.62			
	10	0.54	0.29	0.70			
Gender & Culture	19	0.75	0.56	0.43	0.79	0.56	0.75
	24	0.80	0.64	0.35			
	26	0.70	0.49	0.51			
Price and Quality	22	0.80	0.65	0.34	0.79	0.65	0.82
	23	0.81	0.65	0.34			

Table 5: Discriminant Validity

	GCI	BR	CP	G&C	P&Q
General Color Influence (GCI)	0.625				
Brand Recall (BR)	.561	0.660			
Color Preference (CP)	.608	.519	0.630		
Gender & Culture (G&C)	.304	.362	.233	0.750	
Price & Quality (P&Q)	.131	-.021	-.040	.043	0.809

Table 6: Coefficients of Variance for Linear Regression

Model		Unstandardized Coefficients		Standardized Coefficients	*t*	Sig.
		B	Std. Error	Beta		
1*	(Constant)	1.08	.20		5.38	.000
	Color	.50	.05	.42	9.93	.000
2**	(Constant)	.83	.14		5.73	.000
	Color	.76	.03	.69	20.60	.000
3***	(Constant)	1.25	.13		9.55	.000
	Color	.53	.03	.54	14.01	.000
4****	(Constant)	1.15	.15		7.02	.000
	Color	.55	.04	.50	12.47	.000
5******	(Constant)	1.43	.16		8.71	.000
	Color	.58	.04	.49	12.30	.000

(N = 462)
*Dependent variable: purchasing intentions
**Dependent variable: brand recall
***Dependent variable: purchasing Intentions
**** Dependent variable: purchasing decision
*****Dependent variable: weather / color choice

Table 7: Summary and Analysis of Variance for Linear Regression

Model		SS	Df	MS	*f*	Sig.	R	R Sq.	Adjusted R Sq.
1	Regression	62.15	1	62.15	98.61	.000[b]	.420[a]	.177	.175
	Residual	289.94	460	.63					
	Total	352.10	461						
2	Regression	141.35	1	141.35	424.53	.000[b]	.693[a]	.480	.479
	Residual	153.16	460	.33					
	Total	294.51	461						
3	Regression	105.33	1	105.33	196.33	.000[b]	.547[a]	.299	.298
	Residual	246.77	460	.53					
	Total	352.10	461						
4	Regression	89.03	1	89.03	155.69	.000[b]	.503[a]	.253	.251
	Residual	246.77	460	.53					
	Total	352.10	461						
5	Regression	97.40	1	97.40	151.47	.000[b]	.498[a]	.248	.246
	Residual	295.80	460	.64					
	Total	393.20	461						

(N = 462)

Model 1 - [a]Dependent variable: purchase intentions / [b]Predictors: (Constant), Color
Model 2 - [a]Dependent variable: brand recall / [b]Predictors: (Constant), Color
Model 3 - [a]Dependent variable: purchase intentions / [b]Predictors: Cool/warm/neutral
Model 4 - [a]Dependent variable: purchase decision / [b]Predictors: Color and socio-cultural norms
Model 5 - [a]Dependent variable: color choice / [b]Predictors: weather

Table 8: The Mean Difference between gender and color preference

Variable	Group	N	Mean	SD	*t*	*df*	Sig.
Color preference	Male	183	63.85	.6578	2.198	201	.000
	Female	279	50.08	.2580			

(N = 462)

Table 9: Summary of the hypotheses

Hypotheses	**Status**
Color influences consumer buying decisions.	Accepted
Color facilitates a brand recall.	Rejected
There is a difference between genders on color preferences.	Accepted
There is a difference between cool, warm and neutral colors consumer purchase decision.	Accepted
Color and Socio-cultural norms determine consumer purchase decisions.	Accepted
Color choice is determined by the weather conditions.	Accepted

5. Discussion

The current study investigated the buying behavior of Pakistani consumers with reference to color psychology. Color psychology has been examined from a variety of views for a long period of time, ranging from gender stereotyping to cultural variations and sociocultural norms related with purchase intentions (Bondikian, 2019; Kumar et al., 2017). In our study, we found that color does not significantly facilitate brand recall, which contradicts the findings of Gilal et al. (2018). The authors stated that distinctive and appealing product designs, including the use of color, satisfy the psychological needs of customers, such as independence, competence, and association. It makes customers recall the brand and stay loyal to it. The results of our study show that the design of a product may affect how consumers respond and how committed they are to a brand, but the role of color in making a brand more memorable may be insignificant. There may be a need for additional studies to investigate this difference to understand more about how different design elements affect brand recall and loyalty.

The results showed that consumers do buy things based on their color. Branding and packaging with color have a bigger impact on whether a customer buys a product (Forbes, 2014). Consumers have found that the color of a product affects whether they like or dislike it (Sliburyte & Skeryte, 2014). Color has been found to be an important part of how people imagine things, and certain colors are more prominent in people's mental images, which affects their buying decisions (Stillman, Lee, Deng, Unnava, & Fujita, 2020).

The current study couldn't prove this idea strongly because the linear regression analysis showed a weak-fit model. Previous research shows that color both helps and hurts brand recognition. Brands have found that using the team's colors in their visuals boosts the benefits of their sponsorships and makes it more likely that customers will remember those (Henderson et al., 2019). Color makes people think, and in the case of brand extensions, the color of the umbrella brand has been a helpful factor for consumers (Kim, 2020). The results are interesting because they don't match the

previous ones. This is because Pakistani consumers aren't yet "brand loyal," and they switch brands, especially for commodity products. If marketers want to change the way Pakistani people buy, they need to come up with better branding strategies and make more products available (Osman & Subhani, 2010). In another study of Pakistani consumers, brand recall and brand awareness were linked to actual purchases (Khurram et al., 2018).

A significant difference is found between gender and color preferences. There exists a difference between male and female Pakistani consumers with respect to the lifestyle; their buying behavior clearly indicated defined gender roles, life and financial satisfaction (Bashir et al., 2013). Gender roles are prominently portrayed in TV advertisements also where male dominance could be seen in addition to a higher activity and aggression levels of male characters in these ads; the main purpose of ads is to influence consumers' buying decisions and they do so by clearly projecting gender roles in Pakistani society (Ali et al., 2012). Gender differences were found with respect to price, quality, and brand in shopping (Shabbir, 2012).

Color hues: cool, warm, and neutral do influence consumer buying decisions especially in clothing industry (Casas & Chinoperekweyi, 2019). It was noted that recognition of brands is dependent on three color characteristics: hue, value, and warmth. Women have a stronger affinity for warm hues, while men prefer dark colors. Females' preference is dependent on two attributes: plain/gaudy and slim-look/fat-look, whereas males' choices rest on plain/gaudy and masculine/feminine (Zhang et al., 2019). Marketers use unique color names for their brands to attract consumer attention (Chou, et al., 2020). Yu et al. (2018) reports that utilizing color psychology is effective in evoking certain emotions and experiences of the consumers. The results of our study are consistent with the research carried out by Gilal et al. (2020), which underscores the significance of intrinsic motivation in influencing the actions of consumers. The research revealed a considerable variation in consumer buying behavior, influenced by the classification of colors into three categories - cool, warm, and neutral. The proposition above suggests that color, as a constituent element of product design, has the potential to impact the innate motivation of consumers, as it can fulfill their psychological requisites and inclinations.

Gilal et al. (2020) discuss the correlation between environmentally responsible behavior and color choices in product design, highlighting the potential of the latter to encourage green purchasing behaviors. As an illustration, it is plausible that customers may link specific hues with eco-friendliness, thereby fulfilling their inherent drive to participate in environmentally conscious behavior. Subsequent investigations may explore the plausible association between color perception and environmentally conscious purchasing behaviors.

Use of color and interior designing of dine-in establishments indicate the kind of food they sell but also impact consumers as they visit the eatery (Shen et al., 2018). People tend to enjoy their food in warm lights and colors that present a calm ambiance which may enhance their appetite (Luo et al., 2019).

Color-based socio-cultural norms in Pakistan greatly influence buying decisions as Pakistani culture is a collectivist culture (Ali et al., 2010). Organizations engage in activities which enhance their corporate social responsibility (CSR); these CSRs depict socio-cultural norms of the society they operate in. Pakistani consumers also reflect a positive attitude towards CSRs be it philanthropic or ethical. (Safi, 2013). Purchasing intentions are strongly connected with color preferences across cultures (Gao, et al., 2007). For instance, red is considered a color of fortune in China and a misfortune in Germany and Nigeria. Blacks are most valued at funerals to whites at weddings (Bytyci, 2020). A hype of environment-friendly-products reflects a social norm for preference of such products; goods that match the persons' color palette and scheme were automatically purchased (Shridhar & Shrivastava, 2018). Within the socio-cultural net, old brands and nostalgic ads have varying effects on consumer engagement based on age and gender (Gilal et al., 2020).

Weather has been found to positively affect mood of the individuals and thus influence their behavior (Mowen, 1988). Apart from Seasonal products like hot drinks in winters, generally weather determine consumer color choices. Preferences for different flowers and their colors have been found to be determined by weather and geographic conditions in addition to the consumer spending also (Zhao et al., 2016). The current study also revealed a strong relationship between weather and color preferences. The effect of weather particularly sunlight plays an important role where consumers tend to increase their shopping behavior as sunlight decreases the negative effect (Murray et al., 2010). Consumers tend to seek variety in their shopping behavior where bad weather with higher temperatures could enhance consumers' variety-seeking behavior (Tian, et al., 2016).

5.1. Implications for Theory

Investigating the role of color psychology in consumer purchasing behavior contributes significantly to the existing theories and core teachings of the marketing field. (Stillman et al., 2020). The findings of this study, particularly the influence of color on consumer choices and unaided brand recalls, offer a novel perspective on consumer behavior. The function of color as an imaging approach, provide practical and more comprehensive perspectives into consumer studies when written content, sounds, and images interact (Pera et al., 2022). In addition, the study's examination of gender disparities and social and cultural standards in relation to color inclinations brings another level of sophistication to consumer behavior, proposing that these variables should be considered in future studies.

The study offers an intriguing conclusion regarding the significance of temperature in color selection, a less field of marketing concepts. It indicates that environmental variables like the weather may also affect consumer purchasing (Szilagyi et al., 2022). This potentially leads to expanded theories considering a wider spectrum of consumer behavior elements.

5.2. Implications for Managers

The research findings provide useful managerial insights that may influence strategic marketing and product development decision-making. Recognizing the effects of color on what consumers buy enables managers to make more educated choices regarding brand color, product layout, presentation, and advertisement (Labrecque & Milne, 2012). Selecting color palette that trigger the desired feelings from consumers may increase the appeal of products and alter buying choices (Boncinelli et al., 2023). Research highlights the paramount importance of considering the multifaceted nature of demographics and cultural facets, such as variations in gender and societal norms, affecting color palette for design (Chebat & Morrin, 2007). The decisions made in this area can drastically shape how a product is perceived. The color selection should resonate deeply with the core sensibilities of the targeted group.

Our surroundings also influence color choices. For instance, the weather can change what colors we prefer (Oliva et al., 2022). This is something businesses should think about. This may be especially important for businesses nestled in regions with notable seasonal changes.

The knowledge of color psychology could be beneficial in business planning and selecting suitable brand colors in packaging, advertising and brand promotion to attract consumers and improve the product's appeal. In turn, this could build strong brand loyalty, ensuring a steady stream of income and a strong group of consumer advocates. Thus, selecting colors is not just a matter of style but a very important strategic move (Ghuman, 2023).

The findings could be utilized by marketers and advertisers to develop their product packaging and ad campaigns considering color as a major contributing factor in attracting and influencing consumers buying behavior (Stillman, Lee, Deng, Unnava, & Fujita, 2020).

5.3. Limitations

The research was carried out in Pakistan's provincial capital, future studies should examine how results would differ if the same work carried out in a different setting specifically small town. A triangulation of methods would have provided a deeper insight into consumers' preferences with respect to their buying decisions. The study could be less generalized as it used a self-report measure which increases the likelihood of social desirability on participants.

6. Conclusion

The current study aimed to explore the aspects of color psychology in relation to consumer decision-making and brand recall specifically with Pakistani consumers. Color has been found to be an influence on consumer decision-making. The study further concludes a weaker influence of color on brand recall of Pakistani consumers which is in contradiction to previous research findings. Gender differences and socio-cultural norms came out strong with color preferences. Weather has also been found to play a color choice factor in consumers buying behavior.

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