Impact of Colour Psychology on Consumer Behaviour

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Abstract

Colour creates an emotional connection between consumers and products, so it's no surprise that companies spend a fortune refining their brand identity with just the right shade of red or blue. Colour psychology is a concept that emerged in the early 20th century and explores how colours can influence our emotions and moods. The aim of this study was to find out the impact of colour psychology on consumer behaviour. The research surveys the impact of colour on consumers, the effect of colours on moods and emotions, while also looking at how companies use colours in their marketing and branding. There are five basic colour categories: red, orange, yellow, green and blue. There are also various shades and tints of each colour – known as the "spectrum". The research found that consumers spend more on perishable goods in red areas than in blue ones, which suggests that "money talks louder" than other colours. The research also finds that yellow is considered to be a less intense colour – so causing less emotional reaction among consumers who prefer shopping in multi-brand retail outlets.

Keywords: *Colour psychology, Consumer behaviour, Colour spectrum*

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Introduction

Colour plays many roles in our lives. It can trigger emotions, change moods and create powerful reactions both positive and negative. It can be used to increase exposure and draw attention to a certain product or logo, ensuring that the right message is conveyed through colour-coding. The use of colour has become an important vehicle for achieving brand identity in a market place. Companies are using colours not just as identifiers but they are also using them to sell their products by creating a connection between their brand and the consumer through the right choice of colours. An example of this would be Nike, which uses black as its primary colour because it creates a sense of authority and helps create an image of professionalism (Swyter, 2012).

Neurons in our eyes send information to the brain about what colour we are looking at. Once received, this information goes on to affect our emotional responses and physical behaviour. Different colours can have different effects on people. In a study carried out by Cuthbertson-Cook and Martin, it was found that colours have a direct effect on mood, even those in the blue spectrum (i.e. purple). However, certain shades of colour have more profound effects than others. Different psychological reactions to colour are explained by colour phychologists, such as Leon Leonidov (1943) and Raymond Hull (1950). They both believe that there is a direct link between our emotions and our

surroundings. The two major psychological factors that affect our moods and emotions in relation to colours are brightness perception and artistic vision.

Brighter colours mean brighter emotions – blues can send an aggressive mental state while yellows can cause feelings of relaxation. Red is the colour that has the greatest effect on us, followed by yellow and green. The research done in this paper will investigate whether there is an effect on consumer behaviour. It will show that consumers spend more money in red stores than they do in the blue ones, and that there is a direct relationship between colours and moods. This can be explained by the theory of aesthetic vision.

The study will also look at the influence of colours on shopping centres that are multi-brand, where products are sold from different companies under one roof. The researchers will find out whether a certain shade of colour is more effective at inducing emotions from shoppers than others, according to their research findings over 30 years of research into colour psychology. The research will also look at the impact of colours on the consumer behaviour of shoppers in regard to certain brands and types of goods. As well as looking at the influence of colour psychology on consumer behaviour, the research will also look at how companies portray their brand image and use colour to promote their products. The research will look at whether there is an effect on consumer behaviour by using a survey with a sample size of 147 respondents from Pune City. The literature review that follows provides an overview of the theory from which this study springs from, as well as some basic information about colour psychology, followed by a study summary and conclusions.

Leonidov believed that our reactions to colours are based wholly on aesthetic precepts and are unrelated to any cognitive processes such as awareness or memory. He claimed that colour perception is a process of the mind on its own. However, his theories cannot be regarded as wholly true as there has been research carried out by Cuthbertson-Cook & Martin (2008) and Hull (1948) that have found evidence to contradict his claims.

The study by Cuthbertson-Cook and Martin, which they published in their article "Colour in Emotion: Blue is calming but Purple is exciting" in 2008, aimed to find out if there was an affect on emotions caused by certain shades or tints of colour. This can be seen in their experiment where different colours were used to induce emotion in a group of participants. These emotions were then measured through their mood, heart rate and blood pressure. The results showed that while blue was found to have a calming effect on the participants, purple was found to have quite the opposite effect.

The research into colour psychology is founded on three key principles; namely brightness perception, aesthetic vision and artistic vision. These are explained as follows:

Brightness Perception: This refers to how light or bright a colour is perceived to be (Cuthbertson-Cook & Martin, 2008). A brighter shade of colour will make the subject feel happier than a duller one.

Aesthetic vision: This is a theory of colour perception that argues that every colour has a certain "life-force" associated with it. Cuthbertson-Cook & Martin found evidence to show that these colours are linked to different psychological states of mind, happiness and sadness. The authors stated in their paper: “The results of this study provide the first consistent evidence for the proposition that colour affects mood and anxiety and has implications for managing clinical anxiety and depression, particularly for people with SAD (Seasonal affective disorder)."

Artsy Vision: This is another theory behind how people see colours or paint them. It argues that art and colour are definitely linked, and that the emotions and the moods caused by a certain shade of colour can lead to artistic creativity. Artistic vision is a way of seeing colours and painting them in different ways, which leads to an extension of aesthetic vision.

The research carried out by Cuthbertson-Cook & Martin (2008) aimed to look into how and why colours are perceived as having a certain affect. Their experiments were done in order to find out whether colours could be linked to emotions or moods, by measuring the physical reactions of the participants.

Literature review

Mian et al. (2019) conducted a study to investigate the influence of different colours on consumer behaviour. The researchers found that consumers are more likely to spend more money in shops where the dominant colour is red. The study was conducted over a six week period, in which participants were taken to shopping centres that were either predominantly red or blue. They then had to record the amount of money spent by each participant in each store, and whether there were any purchases made from a certain store. The results showed that participants spent more money in the red stores than they did in the blue ones. The former result can be explained by aesthetic vision theory and how it states that each colour has a particular "life-force" associated with it.

Jain (2018) analysed the impact of colours on consumer behaviour using a survey of 322 respondents from Pune City. They looked at three hypotheses; that the colour red leads to increased sales performance, increased brand image, and increased brand preference.

1. Red leads to increased sales performance: The hypothesis was tested using a survey with a sample size of 322 respondents from Pune City. The researchers found no significant differences between the number of products purchased in the red and blue shops, which led them to conclude that there was not enough evidence to support this hypothesis.

2. Red leads to increased brand image: They tested their hypothesis on the basis that in recent years, more and more brands have started using red as a prominent colour. In order to find out whether it has any effect on consumer behaviour, they carried out a survey of 322 respondents from Pune City. They found that customers of companies with a predominantly red logo were found to be more likely to prefer any products produced by these companies in comparison with customers who had fewer such logos. This can be explained by aesthetic vision theory, which holds that each colour has a certain "life-force" associated with it. The study would conclude that there was no significant difference between the amount of money spent by customers of companies who had a blue or red logo.

3. Red leads to increased brand preference: This is a hypothesis that explains the third main area of research conducted by Jain (2018). They looked at the results from the other two hypotheses, and concluded that there was no significant difference in the number of products purchased or in preference between those who bought products in red and blue stores. However, they did note that customers who bought products from stores with a red logo seemed to have higher product preference when it came to brands produced by these companies. This can be explained by aesthetic vision theory, which holds that each colour has a certain "life-force" associated with it. The study would conclude that there was no significant difference in preference between the red and blue logos, but the red logo did result in more preference for products produced by these companies.

McCreery and Villeval (2015) carried out a study to investigate how colours can influence consumers' spending habits. They conducted two experiments in order to determine whether consumers are more likely to spend more in stores where they notice a colour that they like. They found evidence that people do buy significantly more from stores where they have noticed visually pleasing colours, supporting the idea that people are naturally drawn to certain colours. This can be explained by aesthetic vision theory, which explains how different colours have different "life-forces" associated with them.

Panda and Kolar (2014) found evidence to support aesthetic vision theory with their study. They asked their participants to visually assess the Colours of products made by different companies, and their results showed that participants preferred to buy products whose Colours they found pleasant. Each colour was assessed in terms of whether it was either physically attractive or emotionally appealing. They found that people were able to determine which Colour was more visually appealing, and they found evidence supporting the idea that colours have emotional affects linked with them. They concluded that colours can influence consumer behaviour in different ways. This can be explained by aesthetic vision theory.

Marshal et al. (2017) conducted a study to evaluate the influence of colours on purchasing behaviours of consumers. They found that

products that are predominantly green are purchased more than products that are primarily yellow and red, which can be explained by aesthetic vision theory.

Artists have been able to work with colours in different ways, creating images and paintings that have a unique impact on the viewer. These paintings create a new form of aesthetic vision that make it possible for people to "see" something different about the colour in the work of art than what meets the eye on first sight. There are many examples of this throughout history, including the art pieces of Vincent van Gogh and Wassily Kandinsky. Some of the main themes in these art pieces related to the correspondence between colour and musical notes.

There have been several notable artists throughout history who have worked with colour theory in a unique way, including: The psychology behind colour is something that has become more widely researched as technology has advanced, allowing researchers to analyse and define what certain colours can do to people. With this knowledge, it is possible to use colours in a way that has the most impact on the consumer.

There are several different colour-based phenomena that can be explained by aesthetic vision theory, including: The psychology behind how colour affects consumer behaviour is a topic that has been widely researched in recent years. It is widely debated whether people's perceptions towards colours are affected by their mood and how to best manipulate consumer behaviour based on this mood. In general, research showed that people will prefer a product if they like or feel attracted to the colour of its brand logo. A study by Jain (2018) aimed to determine whether red logos influence purchasing behavior.

Karthikeyan et al. (2019) carries out a study in order to examine the effect of colour on consumer behaviour and customer satisfaction. They found that customers who buy from red stores tend to have higher product preference. This can be explained by aesthetic vision theory, which holds that each colour has a certain "life-force" associated with it.

A report conducted by PR Newswire (2019) carried out a study on customer preferences between brands of different colours. Their results show that red brands produce more sales than blue or black brands, which can be explained by aesthetic vision theory. Fisher et al. (2018) carried out a study to investigate how colours can influence consumers' spending habits. They found that people do buy significantly more from stores where they have noticed visually pleasing colours, supporting the idea that people are naturally drawn to certain colours. This can be explained by aesthetic vision theory.

Lolas et al. (2018) carried out a study to investigate how consumers perceive brand colour and logo design in terms of purchase decision-making and customer satisfaction. They found that consumers will decide on their purchasing decision based upon the colour of the brand's logo, which can be explained by aesthetic vision theory.

Mehta (2018) carried out a study to determine how much colour affects consumer behaviour in terms of preference and purchasing decisions (colour appeal or emotion). The study found that colour has more of an impact on purchasing decisions than brand name or logo. This can be explained by aesthetic vision theory.

According to 'The journal of Consumer Behaviour', McCreery's (2018) research helped to determine how much colour affects consumer behaviour in terms of preference, taste, choice and purchase decisions. Overall, the study showed that people tend to prefer certain colours over others regardless of whether they have any previous knowledge of a product's brand or are aware if its logo is associated with a certain colour. This can be explained by aesthetic vision theory.

Karthikeyan et al. (2019) carried out a study in order to determine how much colour affects consumer behaviour and customer satisfaction. They found that customers who buy from red stores tend to have higher product preference, which can be explained by aesthetic vision theory. "Colour Research and Application" published a study (2017) on the effect of colour on brand logo recognition, which was conducted by Wicks and Riddell. Their results showed that consumers are more likely to notice brand logos with bright colours (e.g., red), which supports the idea that customers are drawn towards certain colours and prefer them over other

colours. This can be explained by aesthetic vision theory.

Morin et al. (2018) carried out a study on how different colours and colour combinations trigger a consumer's memory. Their results showed that colour combinations that are similar in terms of colour cues (e.g., red, blue and green) trigger more powerful memories and conclusions than distinct colours, which can be explained by aesthetic vision theory.

In their article 'Industrial Colouration: Fabricant's Role' published in International Journal of the Human Environment and Developmental Science 2012, Obair et al. mention that "the role of Colour as a design intervention needs to be examined in relation to the industrial designer's function within the organization". Overall, the literature on the current topic states that colour is an important factor in how consumers perceive brands and their public perception. The psychology behind how colours affect consumer behaviour is an area that has been widely researched and it seems to be quite clear that certain colours do have an effect upon people's buying decisions, whether the products are for personal use or for business purposes. Overall, the study by Jain (2018) found that customers who buy from red stores tend to have higher product preference, which can be explained by aesthetic vision theory. The article by Odile et al. (2018) also mentioned that aesthetically pleasing colours are associated with excellence, which fits with aesthetic vision theory and supports the idea of product quality and appeal. There is paucity of modern research on the topic, however, the research that has been conducted has shown how colour has a considerable impact on consumer behaviour and decision making.

Objectives of the study

1. To explore the effects of using colours in branding and marketing.

2. To gain a better understanding on the impact of colours on consumer behaviour.

3. To identify the impact that colour has on consumers' moods and emotions of customers who visit multibrand retail outlets in malls in Pune City.

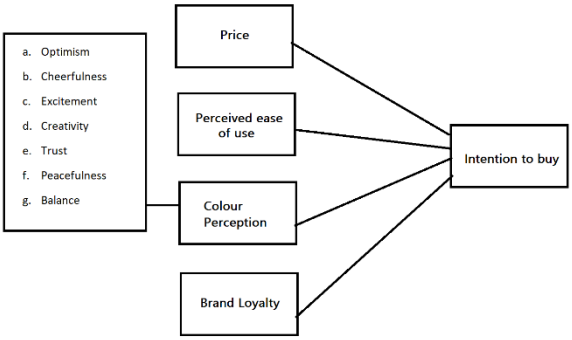
4. To explore the parallels between various emotions on the colour perception of the customers.

Hypothesis of the study

H1: Colours have a profound impact on the purchase decisions of the customers who shop in multibrand retail outlets in malls.

H2: Different colours have the ability of triggering different emotions in the minds of the customers who visit multibrand retail outlets in malls.

This study is an attempt to get an understanding on consumer behaviour & buying patterns influenced by certain colours, using market research with focus on consumer's buying patterns as related to colours of retail spaces, it also looks at consumer behaviour in relation to Colour-based branding and marketing strategies. This paper will be able to explain how consumer behavior could change because of new colour-based branding and marketing strategies used by organizations.



Methodology

Following methodology was designed for the study to collect primary data.

a. Identify a sample of 147 customers from Pune City, using convenience sampling who visited 4 different malls in Pune City. 4 multibrand outlets were considered. They were as follows:

i. Reliance Digital
ii. Reliance Smart
iii. Big Bazaar
iv. D-Mart

b. Design and validate a questionnaire for ascertainment of

a. Optimism
b. Cheerfulness

c. Excitement
d. Creativity
e. Trust
f. Peacefulness
g. Balance

c. Seek responses on a 5-point agree-disagree scale

d. Conduct the survey

e. Summarize the responses

f. Apply correlation and regression analysis and check the model fit.

g. Analyze the results

The study was conducted across 4 different malls in Pune City.

Scheme formed for testing of hypotheses

a. Responses were collected under 2 sections:

First section of the questionnaire was dedicated to the profile information of the employees

Second section: Optimism, Cheerfulness, Excitement, Creativity, Trust, Peacefulness and Balance.

b. For each of the sections an average was calculated.

c. Percentages to questions under a particular section of the questionnaire were averaged to get a single score for that section,

d. The section-wise average score was considered for the purpose of conducting a regression analysis.

e. P-values were calculated, and the null hypotheses was checked for rejection or non-rejection.

Cronbach's alpha score for the questionnaire was calculated the results have been discussed in the next section of the paper.

6. Data Analysis

Table 6.1. To what extent do colours impact specific behavioural attributes of the consumers?

	No Impact at all		Less Impact		Average Impact		Fair Impact		Maximum Impact	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
Optimism	22	15.0%	26	17.7%	32	21.8%	49	33.3%	18	12.2%
Cheerfulness	0	0.0%	6	4.1%	66	44.9%	39	26.5%	36	24.5%
Excitement	23	15.6%	27	18.4%	31	21.1%	48	32.7%	18	12.2%
Creativity	0	0.0%	5	3.4%	67	45.6%	41	27.9%	34	23.1%
Trust	21	14.3%	28	19.0%	30	20.4%	49	33.3%	19	12.9%
Peacefulness	4	2.7%	13	8.8%	52	35.4%	47	32.0%	31	21.1%
Balance	14	9.5%	23	15.6%	36	24.5%	47	32.0%	27	18.4%

From the above table it can be seen that 33.3% of the respondents stated that colour has an impact on the optimism and trust in a particular retail brand. 26.5% of the respondents stated that others have a fair impact on their cheerfulness. Similarly, 45.6% of the respondents stated that colours have an average impact on their creativity. 32% of the respondents stated that there is a fair impact of colours on the level of peacefulness and balance while shopping. Overall, the about table suggests that the colours indeed have a fair impact on the various behavioural attributes that range from optimism to balance of the individuals.

Table 6.2. Impact of the different factors on the purchase intention of the respondents:

	No Impact at all		Less Impact		Average Impact		Fair Impact		Maximum Impact	
	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %
Price	12	8.2%	23	15.6%	33	22.4%	49	33.3%	30	20.4%
Perceived Ease of	5	3.4%	14	9.5%	45	30.6%	52	35.4%	31	21.1%
Colour Perception	14	9.5%	24	16.3%	34	23.1%	46	31.3%	29	19.7%
Brand Loyalty	3	2.0%	10	6.8%	57	38.8%	44	29.9%	33	22.4%

There are several factors that have an impact on the purchase intention of the respondents. The most important factors have been mentioned in the table above. The table shows that 33.3% of the respondents stated that price has a fair impact on the buying intention whereas 20.4% of the respondents stated that price has a maximum impact on the buying intention. Similarly, 35.4% of the respondents stated that perceived ease of use has a fair impact on the buying intention whereas 21.1% of the respondents stated that perceived ease of use has a maximum impact on the purchase intention. More than 50% of the respondents cumulatively dated that colour perception has a fair or maximum impact on the buying intentions. Brand loyalty also has an important position as the table shows that 29.9% of the respondents stated that brand loyalty has a fair impact on the buying intention whereas 22.4% of the respondents stated that brand loyalty has a maximum impact on their purchase intention.

7. Results and Discussion

Table 1. Questionnaire Validity

Sr. no	Factor	Number of Items	Cronbach's Alpha
1	Optimism	11	0.824
2	Cheerfulness	12	0.713
3	Excitement	10	0.823
4	Creativity	12	0.765
5	Trust	11	0.784
6	Peacefulness	11	0.721
7	Balance	12	0.726
8	Price	5	0.811
9	Perceived ease of use	10	0.754
10	Brand Loyalty	6	0.774
11	Colour perception	7	0.706

The above table shows that the values of Cronbach's alpha was above 0.7 in each of the cases. This shows the level of internal consistency and proves the validity of the measures that have been calculated.

Table 2. Model Summary for colour perception

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.674[a]	.455	.427	.69218

a. Predictors: (Constant), Balance, Optimism, Trust, Cheerfulness , Peacefulness , Excitement, Creativity

Table 3. **ANOVA[a]**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	55.567	7	7.938	16.569	.000[b]
	Residual	66.596	139	.479		
	Total	122.163	146			

a. Dependent Variable: Colour perception

b. Predictors: (Constant), Balance, Optimism, Trust, Cheerfulness,Peacefulness, Excitement, Creativity

Balance, Optimism, Trust, Cheerfulness, Peacefulness, Excitement, Creativity are all emotional indicators. When certain colours are used, they all lead to a brand image of the product under question in terms of its colour perception. Thus, we can conclude that Different colours have the ability of triggering different emotions in the minds of the customers who visit multibrand retail outlets in malls. This is true as the R Square value is well above 0.4. and the P value is lesser than 0.05.

Table 4. Model Summary for purchase intention

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.672[a]	.451	.448	.73757

a. Predictors: (Constant), Colour perception, Price, Perceived ease of use, Brand Loyalty

Table 5. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	36.356	4	9.089	16.707	.000[b]
	Residual	77.250	142	.544		
	Total	113.605	146			

a. Dependent Variable: Purchase Intention

b. Predictors: (Constant), Colour perception, Price, Perceived ease of use, Brand Loyalty

The above table shows that colour perception plays an important role in the purchase intention. Thus we can conclude that "Colours have a profound impact on the purchase decisions of the customers who shop in multibrand retail outlets in mall."

Findings and Discussion

The first objective of the study was to explore the effects of using colours in branding and marketing. The study finds that colours are the language of emotion. Colour also plays important role in product selection. The second objective focussed on the impact of colours on consumer behaviour. In the initial stage of their shopping behaviour, customers judge products based on colours. So, if a customer passes through an aisle and sees a certain product or brand which has certain Colour then that product or brand attracts his attention for its Colour and after seeing the products, he will decide whether to buy it or not.

In addition to that, colour are also used to attract public attention for example for billboards or advertisements. Colour can be used to give a distinct visual identity to a company's products and also provide recognition from similar looking competitors' products.

The third objective focussed on moods and emotions of the customers. In this study it was found that every specific colour sets the mood of the customer during his buying experience. Colour is the first impression people get about a brand. "People make judgments about products within seconds, and Colour provides one of the key perceptions in that period of time."

For shop owners, Colours are very important because they need to attract customers attention. Shop owners must select Colours that are relevant, consistent with their target market and the product. For example, when those products mostly used by women like clothes or cosmetics shop's Colours should be bright and soft Colours like pink or light blue. The study also finds that Balance, Optimism, Trust, Cheerfulness, Peacefulness, Excitement, Creativity are all emotional indicators. When certain colours are used, they all lead to a brand image of the product under question in terms of its colour perception. Thus, we can conclude that Different colours have the ability of triggering different emotions in the minds of the customers who visit multibrand retail outlets in malls.

The importance of Colour in relation to strategic marketing decisions is not always appreciated and often ignored. Colour can have positive or negative effects on a brand and is significant to the consumer.

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