

## Relationship Assessment of Colors and Product Selection

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### Abstract

### Original Research Article

Research is qualitative in nature where the relationship has been tested and assessed for colors and product selection. The main logic of this study is to understand the color from the eyes of customers. The study observed the research problem as concentrating on understanding of the product selection process and the importance of color in the process. Research objectives formulated as to identify the importance of color for product selection, to know the effect of color of packaging in buying and to understand the need of color on a product. Research Questionnaire is constructed based on standardized measurement instruments and to be filled through university students, and some local stores. The survey has two portions; demographic questions are incorporated into first fragment and second section incorporated the survey that is identified with research factors. For this study, Students of universities from different departments and consumers from different local stores have been chosen as the sample size of 109 respondents, so the sample size is 109. All of the items have .000 significant values, which mean that all items can be taken for further studies. The result of the Pearson analysis between two variables (Color and Consumer Behavior) is seen as follows,  $R = .831$  that show that color is positively high correlated with Consumer Behavior, and identify the importance of color on consumer behavior.

**Keywords:** Consumer behavior, colors, product selection, advertising, brand, university.

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## INTRODUCTION

Consumer behavior is a controversial and challenging issue and involves mixing and marketing individuals and what they buy, why and how they buy it. Consumer behavior is a very interesting field to study. Because they are consumers who buy goods and services, they can use their daily experience to perceive the concepts and theories in this area. The perception of consumer behavior and the evaluation of consumer performance have a special precaution in view of the cultural differences in different societies. Consumer behavior is a subtle phenomenon because individuals do not always act in a clear way. Their performances as consumers are often foreseeable and even unexplainable. Individuals gain practical experience by observing the shopping behaviors of others and doing their own shopping [1]. A human being is constantly affected physically or psychologically by colors. Colors have apparently a psychological nature that indirectly affects norms, reactions and individual behavior that have effects on human beings [2]. Purchasing behaviors are the decision processes and actions of the people involved in purchasing and using the products. In order to understand purchasing behavior, we need to understand why consumers are making purchases that they are purchasing, what are the factors that control

consumer purchases, and understand changing factors in our society. There is an attempt to investigate the buying behavior of buyers; the response of a company to its marketing strategy has a great effect on the success of your company. A company create such strategies to satisfy its customers and evaluate their intention, when, when and how they buy it. Marketers can better estimate how buyers will react to marketing strategies. Many factors have effect on consumer's behavior. Brown said that the majority of buyers were influenced by some impact factors such as prestige, advertising, and satisfactory familiarity in use, but at the same time, they seemed to be the pity of the authentic liking of a meticulous head brand. However, an important factor is the psychological effect of the consumer's mind [3]. Sewall said that in the market segments, many people with different intentions to buy similar products were observed. Consumer is one of the basic things that have a psychological influence on the mind and ultimately result in buying behavior.

In our daily lives, there are many things that we have taken for granted in the sense that we do not notice, acknowledge, enjoy them fully or sometimes even complain about. Among those precious gifts existing in our life, there are the ability to see things in

colors and the color itself. Color affects every moment in life. An important marketing communication tool, it is an unforgettable visual element and carries basic symbolic and relational information about products [4]. It has a strong impact on the clothes we wear, the cars we use, the backpack or handbag we use, the shoes or shoes we wear, and the furniture in our homes. The color of the product can play an important role in the purchasing decisions of the consumer for certain products [5]. Many companies around the world are hiring color consultants to identify the best color for their products, addressing potential buyers. 62-90% of a product purchase decision is based on the product's color, and the decision is made within a certain amount of time after seeing the colors [6]. Color is a remarkable feature for presenting images. It improves recognition, memory and increases subjects' attention [7]. The psychological impact of colors on the process of consumer shopping behavior has been scrutinized in a study. To attract customers, color is noted as an important factor. The psychological impact of the colors and getting to know the different methods will be very helpful to the designers. The designers choose innovative colors, a color that goes with the product's nature [8]. In addition, certain colors can be specified by marketers by using association theory and can be used as an experimental sign or image expansion.

Among the number of marketing researchers, the color scheme gains increased awareness and popularity. The main reason is that the human brain receives signals faster from the eyes than from the ears. Young supported this by showing the effect of a bright body and its colored particles when it entered a person's eye. It is obvious that the image is easily felt and then uses other senses. Palmeri [9] explained that the visual appearance of the objects first acts on neural activity in different brain area and helps in product validation and detection. It is possible to increase the quality of the visuals used in advertisements and packages through different methods. In these days, we see that an effective color scheme on a product gains success in consumer, and due to the poor color scheme, many products fail to gain success. The brightness and saturation levels of colors have different effects depending on saturation level [10].

## LITERATURE REVIEW

Every moment in life is affected by color. It is an important marketing intermediary tool, an unforgettable thing, and it carries main symbolic and related information the product [4]. It has a significant effect on the clothes we wear, the cars we drive, the backpack or handbag we want to use, the shoes or sneakers we wear, and the goods in our homes. The color of the product may play an important role in the consumer's purchasing decisions for certain products [11]. Color experts and consultants are hired by many of the world's largest companies to help

determine the best colors for the product they can give potential buyers. 62-90% of a product purchase decision is based on the product's color and the decision is made immediately after seeing it [6]. Color is a remarkable feature for presenting images. It increases understanding and knowing, noticing and enhances attention for the subject [7]. Blackwell, Miniard, and Engel [12] define consumer behavior as the activities undertaken during the acquisition, consumption and disposal of goods and services. Consumer behavior has always been a more attractive field for market oriented marketers than product orientation over the history of marketing because it is the study of why people buy it. Marketers who have knowledge of specific consumer products, services, or brand buying behaviors can develop strategies that will influence consumers' purchasing behavior.

Rouland was examined, the psychological effects of the colors on consumers' shopping behaviors in his study to attract customers, color are considered as an important factor. Getting to know the psychological effect of the colors and the different fusions will be very helpful to the designer. Designers choose a specific color suitable for the nature of the product [8]. In addition, certain colors can be symbolized by marketers which use series theory also going to be used as experimental signs or image extensions. Research on color schemes has resulted in increased awareness and popularity among countless marketing researchers. The human brain receives eye signals much faster than the ears signals, which is why this is the main reason behind it. Young supported this by showing a brilliant cumin and its colored particles when they entered a person's eye. It is apparent that the image is easily felt and then getting to use other senses [13] Palmieri explained that visual look of objects first moves to neural activity in various brain zones and helps to confirm and identify the product. The quality of visuals used in advertisements and packages can be increased by using different methods. Nowadays, we can see that the product versus an influence color scheme is successful in consuming and many products fail because of the poor color scheme. Brightness and saturation levels of colors are having different effects depending on saturation level [10].

Color can be distinguished in hue, brightness, and saturation [14]. Cool and warm are broadly the main hues of the colors. Cool colors are also known as shortwave long colors, which are purple and blue. Violet and blue are known as cool colors which they have short wavelengths. Red and orange are known as warm colors which they have long wavelengths. There is a color hierarchy from violet, blue and green known as short wavelength colors to yellow, orange and red which is long wavelength color [15]. In color perception, brightness and saturation play an important role. Lightness or darkness of colors is regulated by brightness. A light color is reflecting a lot of light,

in other hand a dark color is reflecting less light. The purity of colors depends on their saturation; pure color has high saturation and pale, greyish color has low saturation. Colors are more pleasant with both characters increasing [16, 15]. Hemphill has proved that bright colors are associated with positive emotions like happiness, sense joy and life hope. It also prefers that brighter colors are being worked on as culture, friendlier, beautiful. On the contrary, dark colors evoke negative feelings like boredom and sadness [16]. Elliot and Maier found that colors could stimulate associations and reactions. This refers to the member of the researchers; color can be divided into two meanings. First, the meaning of colors can be a result of learned relationships such as red, orange and green colors in traffic lights. Second, the meaning of colors can be extracted by nature, the link between black and death [17]. Crowley also pointed out that emotional reactions from color are the results of learned associations based on an individual's culture and characteristics [18].

The relationship between color and mood were analyzed by researcher. Participants were faced with colored cards and asked to indicate their relationship with different moods. Calmness and serenity were associated with cool colors. On the contrary, stress and excitement were associated with warm colors. However, participants in the study were only exposed to color cards and were not situated in a colorful environment. According to Wexner, there is a relationship between wavelength and excitation level. These findings were later verified by Valdez and Mehrabian [14], which came to the conclusion that long-wavelength colors aroused more than short-wave color. Colors have the power of attracting attention, which is named as color's approach orientation [18]. Retailers can use this for kindling approach behavior and peoples personality. Bellizzi and Hite's [19] research showed that people tend to be more interested in looking around and buying products compared to red in a blue shopping environment. More purchasing were made, and more money were spent in a less distracting blue environment. In addition, an experimental study [19] was examined on the approach behaviors and attractiveness of different colors. The study quantified the distance and angle at which participants were sitting down relative to a colored wall [15].

In order to be able to use colors in marketing activities, marketers must understand what emotions and needs can be triggered by targeted customers. From culture to culture, the meanings related with colors are different; there is not any universal meaning for any color. The most popular research from North America that emanates colors that can represent and trigger. With the global expansion of North American cultures, the definitions of color meanings have been changed by people all over the

world and share some common points. The North American color meanings are similar to the Western world and are the closest to the Finnish culture [20]. This is a very intense relationship between colors and buying behavior. The packaging and color of the product have direct and most important effect in the spirit of consumers. For this reason, it is important to investigate which color influences are positively influenced and which color influences are negatively influenced in order to influence consumer preference and hence buying behavior. Brody, Stoneman, Lane, & Sanders's [21] research shows that T.V commercials have a great influence on child consumerism. For this reason, children do not know important components or properties of a product. For them, only the color of production is important. For this reason, if an ad has a good color scheme, it will attract too many children and therefore the buyers of the company.

A good trade attracts children's attention and thus persuades their parents to buy the product [21]. Previous studies explain that about 80 percent of recruitment decisions are based on external factors, and 65 percent of them include colors of clothing. Brown and green seem to be increasing their confidence; some designers are using this information for their intake interviews. In addition, black and dark blue means authority. All of this shows the importance of colors in human perception and therefore in decisions. It cannot be denied that color will help attract the attention of the consumers. Because we think that people can see colored items quickly, and in general, colors tend to attract more attention than monochrome. The reason is that the brain's pre-attentive system is designed and evolved to easily detect color in the environment, and more importantly, this system has an instant function of the selection of items for subsequent attentional processing. However, in the world, color never stays alone and it is impossible to be perceived on its own but in the symphony with other adjacent colors; thus using color to capture consumers' attention can face some obstacles of depending largely on the surroundings in which the item with target color(s) is placed and indeed different colors possess unique attention values [22].

### Research Problem

Among the number of marketing researchers, the color scheme gains increased awareness and popularity. The main reason is that the human brain receives signals faster from the eyes than from the ears. Young supported this by showing the effect of a bright body and its colored particles when it entered a person's eye. It is obvious that the image is easily felt and then uses other senses [13]. Palmeri [9] explained that the visual appearance of the objects first acts on neural activity in different brain area and helps in product validation and detection. It is possible to increase the quality of the visuals used in advertisements and packages through different methods.

In these days, we see that an effective color scheme on a product gains success in consumer, and due to the poor color scheme, many products fail to gain success. The brightness and saturation levels of colors have different effects depending on saturation level [10]. Here the study is concentrating on understanding of the product selection process and the importance of color in the process.

### Research Objectives

The study is centered to following objectives broadly to have the reach for solution of the research problem.

- To identify the importance of color for product selection.
- To know the effect of color of packaging in buying.
- To understand the need of color on a product.

## RESEARCH METHODOLOGY

Research design gives a complete map, which is used for data collection and for data analysis. Methods of data collection, how to analyze primary data which is collected by survey. The core objective to conduct the study is to discover the Consumer Behavior towards Colors in Product Selection. I check up the relationship between independent variable Colors and dependent variable Consumer Behavior. Research Questionnaire is constructed based on standardized measurement instruments and to be filled through university students, and some local stores. This study

was held in University and some local stores, and the data has collected from those two places as a sample.

In this research, it has utilized just quantitative strategy for gathering information to discover the appropriate responses in this study. I have gathered primary data through survey method. The survey prepared in view of standardized measurement instruments. The survey has two portions; demographic questions are incorporated into first fragment and second section incorporated the survey that is identified with research factors. To affirm the dependability of the information the institutionalized surveys had utilized. For this study, Students of universities from different departments and consumers from different local stores. I has got 109 responses, so the sample size is 109. I have distributed 120 questionnaires to different departments and local stores, and I have got 109 responses in the end.

### Data analysis

#### Reliability Measures

Here, the study used Cronbach alpha ( $\alpha$ ) scale to check the reliability of adopted construct Cronbach alpha as shown below in Table 1, indicates resemblances of different items being used to measure the same construct. The survey instrument got tested for its reliability for the study and the value of Cronbach's alpha is 0.906 on 16 items so the study which is acceptable so the instrument can get accepted for this specific study.

**Table-1: Reliability Statistics**

Reliability Statistics	
Cronbach's Alpha	N of Items
0.906	16

**Table-2: Descriptive Statistics**

Parameters		Frequency	Percentage
Gender	Male	47	43.1
	Female	62	56.9
Age	16 Years – 19 Years	11	10.1
	20 Years – 25 Years	51	46.8
	26 Years – 30 Years	29	26.6
	31 Years – 35 Years	11	10.1
	36 Years and Above	07	6.4
Family Income/ Month	Up to \$500	45	41.3
	\$501 - \$1000	36	33.0
	\$1001 - \$1500	20	18.3
	\$1501 - \$2000	05	4.6
	\$2001 and more	03	2.8
Color of packaging is a necessary part of product	Strongly Agree	19	17.4
	Agree	44	40.4
	Neutral	31	28.4
	Disagree	15	13.8
	Strongly Disagree	00	00.0
Color of packaging helps in identifying the product	Strongly Agree	12	11.0
	Agree	44	40.4
	Neutral	38	34.9
	Disagree	09	8.3
	Strongly Disagree	06	5.5
I buy product, by getting color advice by my family or friend	Strongly Agree	17	15.6
	Agree	39	35.8
	Neutral	33	30.3
	Disagree	13	11.9
	Strongly Disagree	7	6.4
I select product color according to my age	Strongly Agree	28	25.7
	Agree	36	33.0
	Neutral	30	27.5
	Disagree	14	12.8
	Strongly Disagree	01	0.9
I like color of packaging of any product/brand	Strongly Agree	20	18.3
	Agree	45	41.3
	Neutral	35	32.1
	Disagree	6	5.5
	Strongly Disagree	3	2.8
Color of packaging matters me in purchasing of product	Strongly Agree	30	27.5
	Agree	43	39.4
	Neutral	32	29.4
	Disagree	04	03.7
	Strongly Disagree	00	0.0
I prefer the product packaging having attractive color	Strongly Agree	25	22.9
	Agree	45	41.3
	Neutral	34	31.2
	Disagree	04	3.7
	Strongly Disagree	01	0.9
I purchase products that have adequate color	Strongly Agree	27	24.8
	Agree	46	42.2
	Neutral	32	29.4
	Disagree	04	3.7
	Strongly Disagree	00	0.0
Color is an important part of packaging	Strongly Agree	32	29.4
	Agree	43	39.4
	Neutral	28	25.7
	Disagree	06	5.5

	Strongly Disagree	00	0.0
Modification of color of packaging is necessary time to time.	Strongly Agree	28	25.7
	Agree	49	45.0
	Neutral	22	20.0
	Disagree	10	09.2
	Strongly Disagree	00	0.0
Color of package sometimes mislead buyer	Strongly Agree	28	25.7
	Agree	48	44.0
	Neutral	08	22.0
	Disagree	01	7.3
	Strongly Disagree	00	0.9
Color of packaging helps in avoiding impurity	Strongly Agree	26	23.9
	Agree	48	44.0
	Neutral	30	27.5
	Disagree	04	3.7
	Strongly Disagree	01	0.9
Color of packaging of a new product prompts the buyer to buy the product	Strongly Agree	24	22.0
	Agree	40	36.7
	Neutral	40	36.7
	Disagree	03	02.8
	Strongly Disagree	02	1.8
Color of strong brand should be a well packed product	Strongly Agree	23	21.1
	Agree	45	41.3
	Neutral	31	28.4
	Disagree	09	8.3
	Strongly Disagree	01	0.9
Color of packages should be made such that they can be used as containers later	Strongly Agree	21	19.3
	Agree	46	42.2
	Neutral	30	27.5
	Disagree	12	11.0
	Strongly Disagree	00	0.0
As the color of the packaging of FMCG product change my purchase changes	Strongly Agree	25	22.9
	Agree	45	41.3
	Neutral	29	26.6
	Disagree	08	7.3
	Strongly Disagree	02	1.8
Total		109	100.0

**Table-3: One Sample T-Test**

Test Value = 3						
Items	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence of the Difference	
					Lower	Upper
Color of packaging is a necessary part of product	40.491	108	.000	3.615	3.44	3.79
Color of packaging helps in identifying the product	36.377	108	.000	3.431	3.24	3.62
I buy product, by getting color advice by my family or friend	32.742	108	.000	3.422	3.21	3.63
I select product color according to my age	37.735	108	.000	3.697	3.50	3.89
I like color of packaging of any product/brand	41.043	108	.000	3.670	3.49	3.85
Color of packaging matters me in purchasing of product	48.298	108	.000	3.908	3.75	4.07
I prefer the product packaging having attractive color	46.201	108	.000	3.817	3.65	3.98
I purchase products that have adequate color	49.130	108	.000	3.881	3.72	4.09
Color is an important part of packaging	46.64	108	.000	3.927	3.76	4.04
Modification of color of packaging is necessary time to time	44.727	108	.000	3.872	3.70	4.04
Color of package sometimes mislead buyer	43.945	108	.000	3.862	3.69	4.04
Color of packaging helps in avoiding impurity	47.168	108	.000	3.862	3.70	4.02
Color of packaging of a new product prompts the buyer to buy the product	43.589	108	.000	3.743	3.57	3.91
Color of strong brand should be a well packed product	42.403	108	.000	3.734	3.56	3.91
Color of packages should be made such that they can be used as containers later	42.519	108	.000	3.697	3.52	3.87
As the color of the packaging of FMCG product change my purchase changes	41.268	108	.000	3.761	3.58	3.94

**Table-4: Correlation Test**

Correlations			
	Colors	Consumer Behavior	
Colors	Pearson Correlation	1	.831**
	Sig. (2-tailed)		.000
	N	109	109
Consumer Behavior	Pearson Correlation	.831**	1
	Sig. (2-tailed)	.000	
	N	109	109

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Above shown Table 2, the first evaluation is of Gender which is almost equally distributed, then the age which has the young population 18-25 years constituting the almost 50% of the population. Most of the respondents fall in category where they have less than \$500 as earning and another big segment has up to \$1000. For all conceptual items agree and strongly agree is contributing more than 50% of responses. Further the Table 3, all items are checked for one sample T-test taking the test value 3, which shows all are significant. It shows all items can get used further for study. The Table 4 is the representation of correlation of two variables Colors and Consumer

Behavior, which is again very significant and highly correlated a well.

## FINDINGS AND CONCLUSION

Nowadays, color becomes one of the most important elements in a product that affects consumer behavior. Companies have realized the essentiality of color of production consumer behavior. The purchasing behavior of consumers is highly affected by colors of products. Colors and be fascinating and increase the desire of purchasing products. Some colors are used for specific products, such as black and brown is

suitable for business bags. Therefore, companies have to understand their consumer's behavior towards color, and colors psychological characteristics. Red, yellow and orange colors are warm colors, and they are usually used in production of energy drinks, sport cars, and chocolates. Blue and green are cool colors usually used for peace and comfort by producing comfortable furnishings, bottles of mineral water, bedclothes, and so on.

The aim of this study is to find out the relationship between consumer behavior and color in product selection. So, depending on the data that analysis, which contains 16 items for both independent and dependent variables, as a result of the analysis there is a high positive relationship between consumer behavior and color. All of the items have .000 significant values, which mean that all items can be taken for further studies. The result of the Pearson analysis between two variables (Color and Consumer Behavior) is seen as follows,  $R = .831$  that shows that color is positively high correlated with Consumer Behavior, and identify the importance of color on consumer behavior.

As a result of this study, the data is examining that people are also affected by colors of packaging in selecting products, so companies have to take in consideration this element too. They should choose those colors that are attractive for their consumers, and they also have to make modification after a long time of using the same color of packaging. Moreover, appropriate hues of colors of packaging should be chosen, because consumers will use packages as containers later on. The above statement explains the essentiality of color on a product. In the end, I would like to conclude that, the data and findings of this study shows that there is a positive relationship between color in product selection and consumer behavior.

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