Australian Academy of Business and Economics Review (AABER)
ISSN (Online) 2205-6726
ISSN (Print) 2205-6734

An Examination of Package Color of a Local Product in Indonesia on Consumer Response

Arifiani Widjayanti and Vipul Pare
Flinders Business School, Flinders University, Australia

Abstract

Color influences consumer perception and preference, purchasing, and consumption behavior and helps companies position and differentiate themselves from the competition. Color is an integral aspect of product packaging and influencing purchasing behavior. It is one of the visual cues of packaging that has been neglected in scholarly research, and there is little research that has been examined colors as a main focused of a package and its impact. This study examined the relationship between consumer responses and package colors of a local food product in Indonesia. In Indonesia, marketing of these local food products is limited, and the research on color's impact on food products is virtually none. This study applied three stages of quantitative method approach and multivariate analysis of variance. The result indicated that different package colors of local food product in Indonesia significantly had a different degree of impact on consumer responses. Yellow achieved the highest positive response all the attitudinal and behavioral variables examined, followed by green, red, and blue. This research enhanced the body of knowledge with respect to the impact of color on choice. It provided insights to a practitioner by confirming the impact of color on consumer response. It also highlights which colors is a most significant element in a package and which one is the least, which has wide marketing implications.

Keywords: Color; Package Color; Color Preferences; Consumer Responses; Decision Making; Multivariate Analysis of Variance

1. Introduction

Color plays an important role in affecting human perceptions (Elliot et al., 2007; Piqueras-Fiszman and Spence, 2011). They are part of individual's everyday lives and influencing people's interactions, perceptions, and actions. Color consideration emerges regularly in human decision making and conversation (Elliot and Maier, 2014). Across cultures, people's responses of color association can be consistent (Adams and Osgood, 1973; D'Andrade and Egan, 1974; Gao et al., 2007; Ou et al., 2012). This means that a certain color, for example, green would have the same association in different cultures and regions, which is "healthy." This healthy meaning could impact people's decision making to a great extent. On the other hand, there are studies which propose that the responses or association of a color could be different across culture (Aslam, 2006; Choungourian, 1968; Crozier, 1996; Garth, 1922; Hupka et al., 1997; Madden et al., 2000; Ou et al., 2012; Shoyama et al., 2003). That is, the response of particular color in various places could be opposite or different. For example, red is not only associated to happiness but also the danger that has more negative meaning compare to happiness.

Colors are the key features in product packaging, especially in the food industry (Deliza et al., 2003; Hine, 1995; Hutchings, 2003; Piqueras-Fiszman and Spence, 2011). Packaging acts as a major part in attracting consumer attention, influence their product perception, and purchase decision. It provides food companies a chance to persuade consumers to buy the product before final brand selection (Ares and Deliza, 2010; McDaniel and Baker, 1977). Color (and color schemes) in food

packaging is used to identify product attributes such as flavors, likely price, and even target consumer groups (Kauppinen-Räisänen and Luomala, 2010; Piqueras-Fiszman et al., 2012).

Colors are an integral part of the package (Marshall et al., 2006). A study of how package color influenced consumers' choice was investigated by Garber et al. (2000). The results indicated that the likelihood of picking up and purchasing product depends on the package's novelty, which is influenced by package color. The idea that package color attracts attention, especially when consumers seek variety in their brand choices was also evident (Garber et al., 2000; Schoormans and Robben, 1997). Gollety and Guichard (2011) noted that package with a strong color is better in attracting consumers' attention compare to a package covered by light color. Unfortunately, color was claimed as one of packaging visual cues that has been neglected in scholarly research (Kauppinen-Räisänen, 2014; Orth et al., 2010), and there is a little research that has examined colors as a main focused of a package (Garber et al., 2000; Gordon et al., 1994; Kauppinen-Räisänen, 2011; 2014; Kauppinen-Räisänen and Luomala, 2010; Schoormans and Robben, 1997).

This study aims at examining the relationship between consumer responses and package colors of a particular local food product in Indonesia. The paper follows the following structure; first, we give an overview of literature on color, package color, and consumer response; second, we explain the research approach; third, we present the result of the analysis in the findings section; finally, we discuss the outcomes, implications, and contribution.

2. Literature Review

2.1. Color

Literature on color has been well developed and is focused on certain aspects (Elliot and Maier, 2014); first, how that color is defined and modeled; second, the way color terms are represented in language; third, issues such as color reproduction, color deficiency, and color appearance phenomena; finally on how the humans' eye and brain process color stimuli. In the last aspect, color is considered as a role in our decision making and conversation. Our research falls in the last category.

Impact of colors has been attributed to a wide range of color associations (Dorcus, 1926; Ou et al., 2012), in which color is seen as either a symbol or a sign both positive and negative (Ou et al., 2012). For example, black is associated with negative concepts such as evil and death and prompts people to behave more aggressively toward others (Elliot et al., 2007; Frank and Gilovich, 1988). While red is associated with happiness (Bellizzi and Hite, 1992; Elliot et al., 2007; Soldat et al., 1997; Valdez and Mehrabian, 1994); blue is associated with sadness (Elliot et al., 2007; Soldat et al., 1997), and these colors lead to information processing and behavior consistent with those emotions (Elliot et al., 2007). In performance, red is associated negatively with failure (Elliot et al., 2007; Moller et al., 2009) and danger (Elliot et al., 2007; Pryke et al., 2002). Meanwhile, blue and green have positive links in natural realm (e.g., blue sky [NAz and Epps, 2004] and water; green foliage and vegetation). Blue also represent openness and peace (Mehta and Zhu, 2009; NAz and Epps, 2004); green is thought as calmness and success (Clarke and Costall, 2008; Moller et al., 2009); yellow is commonly used to indicate caution in signage and brake lights (Elliot et al., 2007). In addition, it is worth pointing out that these associations vary with culture, nation, age, gender, etc. These studies demonstrated that the same color possibly has different meanings in different contexts, leading to different implications.

Studies about effects of color been stated with regard to marketing implications are limited. Some of the previous studies addressed issues such as the influence of building, store, and website color on drawing consumers in, keeping them engaged, and enhancing their shopping experience. For example, it has been argued that blue stores and websites are rated as more relaxing, less crowded, and even more trustworthy (Alberts and van der Geest, 2011; Elliot and Maier, 2014; Gorn et al., 2004; Lee and Rao, 2010; Yüksel, 2009). Others focused on the role that color plays in the company and brand identify and recognition (Elliot and Maier, 2014). Beside those attention of studies, color is viewed as integral aspect of logos and product packaging (e.g., Coca Cola red, IBM blue, Cadbury purple) and is presumed to be used in shaping image/personality and facilitating reflexive purchasing behavior (Hynes, 2009). It

is widely agreed upon by marketers, advertisers, and graphic artist that the involvement of color on consumers behavior (Elliot and Maier, 2014; Sable and Akcay, 2011), influences their buying intention (Grossman and Wisenblit, 1999).

Color plays a significant role in global marketing communication (Ou et al., 2012). Color translates intended visual impressions into product (Hsiao et al., 2008; Ou et al., 2012; Tsai and Chou, 2007) and influence consumers' behavior. Consumers desire that the color of a product match its intended use or purpose. For example, they prefer blue for products that are functional or associated with water, while red match for luxury products or are associated with status such as sports car (Bottomley and Doyle, 2006; Elliot and Maier, 2014; Hanss et al., 2012; Ngo et al., 2012). Several researchers emphasized against making global statements about color in the area of consumer behavior because consumer attitudes and behaviors are presumed to be influenced by context-free color preferences that vary by country, region, race, sex, and age (Aslam, 2006; Chebat and Morrin, 2007; Funk and Ndubisi, 2006).

2.2. Package color and consumer response

A package is a critical factor in the consumer decision-making process because it acts as a strong cue at the time of purchase (Silayoi and Speece, 2007). Package influences consumer in decision making through its symbolic or esthetic qualities (Creusen and Schoormans, 2005; Singh et al., 2012; Van Rompay et al., 2009). It signifies the activities associated with the packing of goods/product, handling, unpacking, and display of primary package. It means that a package has a two-fold meaning; package itself and the process associated with the actual use of the package (Bramklev, 2009; Goddard, 1991; Jönson and Johnsson, 2006; Paine, 1990). A package protects and identifies the product physically, benefits in warehousing and distribution of goods, ensures safe delivery of product to the end consumer in good condition.

There are some elements of a package: Design, material, label, shape, size, and color. According to several authors, color is a significant feature in a package (Ampuero and Vila, 2006; Ares and Deliza, 2010; Hutchings, 2003; Marshall et al., 2006), and among packages' features, it triggers the fastest response (Swientek, 2001). Color can be associated with main attributes of packaging: "containments," "protection," "utility-filling and dispensing," and "communication"(Singh et al., 2012; Soroka, 2009).

Numerous studies have been published over the years documenting the role of package color in driving consumers' expectations (Ares and Deliza, 2010; Deliza et al., 2003; Marshall et al., 2006; Piqueras-Fiszman and Spence, 2011). Packagers used color to influence consumers' perception of package weight (Bellizzi and Hite, 1992; Warden and Flynn, 1926) as well as to create psychological meaning (Bellizzi and Hite, 1992; Margulies, 1970; McNeal, 1973). For example, on the psychological studies, blue has been found to be more positive and calm. A more positive, pleasant, and calm store environment would make shoppers more comfortable and more likely to do purchasing (Bellizzi and Hite, 1992). Consumers perceive packaging color at three different, and, in practice, interrelated levels: The physiological, the cultural, and the associational (Hine, 1995; Piqueras-Fiszman and Spence, 2011). The associational level refers to those packaging color expectations that have become associated with a brand image or even a product category, through consumers having interacted with it over some extended period (Garber et al., 2008; Piqueras-Fiszman and Spence, 2012; Spence and Piqueras-Fiszman, 2011).

Using color as a cue on packaging can be a strong association. Consumers learn color associations, which lead them to prefer certain colors for various product categories (Grossman and Wisenblit, 1999). Regarding food package, consumers' association of color was mainly related to flavor (Hutchings, 2003; Marshall et al., 2006). Food package may also create consumers' expectation (Ares and Deliza, 2010; Deliza et al., 2003; Lange et al., 2000). Differences of expectation might be related to consumers' hedonic reaction toward the expected flavor of food. However, in the case of food products, consumers used to taste the food itself, and it is commonplace that food taste can influence product expectations and perceptions (Ares and Deliza, 2010; Deliza and MacFie, 1996; Garber et al., 2000; Koch and Koch, 2003). Therefore, manufacturers should use food package to attract consumers' attention to increase their interest in buying a product and to generate the sensory and hedonic expectation that match the products' real characteristics (Ares and Deliza, 2010).

In spite of the evidence concerning the effect of the color of the cups or containers on people's perception on foods and beverages, there is only limited research to date (Piqueras-Fiszman and Spence, 2012), most of which has been conducted in the domain of wine (Piqueras-Fiszman and Spence, 2012; Spence, 2011). In Indonesia, there has been no such research conducted before, even though as one of marketing tool, a package for locally food product has been weaknesses (Wuryaningrat, 2013). This local food product; a kind of bean-filled pastry called *bakpia*; produced by many local small companies. Although marketed poorly, they contribute much on economic growth (Saroso and Fauzi, 2013). This study aims examined the relationship between some consumer responses and package color of local food product in Indonesia. Researcher focused on a particular region in Indonesia and involved some consumer responses such as consumers' association of color, word of mouth among consumers, consumers' perception of quality, and their intention to purchase.

3. Research Method

3.1. Stage 1

This study was undertaken in three stages. The first stage consisted of questions regarding consumers' preference and likeability of color. The purpose of this stage of the study was to identify colors that were most prominent and perceived as local food package color in Indonesia. Participants filled out the first part about what colors they like the most. Participants responded about the colors that come in their mind related to food package. Table 1 provided an overview of the questions and responses.

A total of 34 different colors were emerged in the study. From these 34 different colors, Table 1 shows each item with four main colors emerged. These four colors were the most relatable and were mentioned most often; blue (43.55%), red (16.23%), yellow (46.77% recalled; 34.56% related to food), and green (38.57%). Similarly, using modus formula, resulted those four colors as the most picked local food packaged colors by consumers. This stage helped in identity these four colors for the main study in stage two and three.

3.2. Stage 2

Stage 2 was the pilot study to examine and finalize the instruments and length of the questionnaire. This study performed multiple Likert-type scale questions and purposed to analyze the validity and reliability of the questionnaire. With sample of respondents 48, the colors that most mentioned in the previous stage were examined in this pilot study. The questionnaire in this study contained several variables; such as preferences and likeability of colors, consumers' association of color, word of mouth, perception of quality, and intention to purchase. Even though result excluded one item of word of mouth among consumers that stated, "I will speak unflatteringly of this product to others," overall the questionnaire is reliable. With the acceptable values of Cronbach's alpha 0.7 to 0.8 (Cortina, 1993; Field, 2013), the questionnaire was found to be very reliable. Values substantially <0.7 indicate an unreliable scale.

Table 1: Color preferences and likeability

Items	Color most mentioned	Percentage in each item
What color do you like the most?	Blue	43.55
Any other (up to 3)?	Red	16.23
Related to local food package color, what first color comes in your mind?	Yellow	46.77
What are the others?	Green	38.57
Related to local food package color, which of the following colors do you prefer?	Yellow	34.56

3.3. Stage 3

In this stage, the relationship between consumers' responses and package colors was examined. As mentioned before, consumer responses included consumers' association of color, word of mouth, consumers' perception of quality, and their intention to purchase. Besides that, we aimed to verify the preferences and likeability consumers of colors. We applied multivariate analysis of variance (MANOVA) with several color treatments (groups); (1) blue, (2) yellow, (3) green, and (4) red. Compared to ANOVA, MANOVA has the greater potential power to detect an effect, whether groups differ along a combination of variables (Field, 2013).

Questionnaires were distributed to 458 participants. The sample was the consumers of locally food product in a particular region in Indonesia. Each participant gave response to four treatments with and the questions were shuffled. Table 2 shows that there is similar sample size in each group. Implemented all treatments to each sample means they were embroiled in all four groups (blue, yellow, green, and red). Each of 458 participants was committed to be involved in blue, yellow, green, and red groups.

4. Findings

The selection on MANOVA was based on the aim to analyze a dependence relationship represented as the differences in a set of dependent measures across a series of groups formed by one or more categorical independent measures (Hair et al., 2014). It was designed to look at several dependent variables (outcomes) simultaneously and so was a multivariate test (many variables) (Field, 2013).

Used a general linear model approach in MANOVA, outcome shows in Table 3 reveals results of descriptive analysis. This analysis displays each group and total means in every single dependent variable. Table 3 performs 17 dependent variables, which are subscales of preferences of color, quality, intention to purchase, consumers' association of colors, and word of mouth among consumers. It indicates that yellow has the highest mean (5.13) in quality, follows by green (4.83) and red (4.16) with higher values, and blue with the lowest (3.65). In the same sequence of means values, yellow also reaches the highest in 16 other dependent variables (color preference, color likeability, safety, appearance, value, likely of buying, definitely of buying, consider of buying, frequent of speaking, recommendation, encouragement, fitting, compatibility, positiveness, palatability, highly preferences). This performance defines that consumers preferred yellow package color in general. Yellow received the highest positive response of all variables by consumers, followed by green, then red and blue as the most unlikely to be selected. Standard deviation reveals almost similar values in all group and each dependent variables that explain homogeneity of the samples.

The pattern is same across all variables. That is, yellow reached the highest positive response and blue got the least positive response across all variables. This shows that result of this study stated that consumer has a positive perception and preference toward yellow packaging and least toward blue. For example, they perceived the quality, safety, appearance, and value of the food better in yellow package with the mean of 5.13, 5.11, 5.10, and 5.09. Consumers had high intention to purchase the food in the yellow package. It shows in Table 3 with the mean of 5.04 (likely of buying), 4.96 (definitely of buying), and 4.74 consider of buying). The yellow package more positively motivated consumers to speak frequently (4.79), to recommend it to others (4.93), and to encourage people (4.78). Finally,

Table 2: Sample size

Groups (based on colors)	Number of sample size (each sample experienced all treatments)
Blue	458
Yellow	458
Green	458
Red	458
Total	1832

Table 3: Descriptive Statistics (continue)

Items	Group	Mean±SD	Number of sample
Frequent of speaking	Yellow	4.79±1.558	458
	Green	4.52±1.627	458
	Red	3.71±1.728	458
	Blue	3.49±1.705	458
	Total	4.13±1.742	1832
Recommendation	Yellow	4.93±1.594	458
	Green	4.65±1.586	458
	Red	3.79±1.631	458
	Blue	3.44±1.717	458
	Total	4.20±1.742	1832
Encouragement	Yellow	4.78±1.592	458
	Green	4.55±1.664	458
	Red	3.89±1.684	458
	Blue	3.46±1.711	458
	Total	4.17±1.743	1832
Fitting	Yellow	5.30±1.588	458
	Green	4.85±1.655	458
	Red	3.94±1.787	458
	Blue	3.32±1.746	458
	Total	4.35±1.862	1832
Compatibility	Yellow	5.29±1.563	458
	Green	4.85±1.655	458
	Red	3.95±1.716	458
	Blue	3.39±1.708	458
	Total	4.37±1.819	1832
Positiveness	Yellow	5.24±1.550	458
	Green	4.95±1.614	458
	Red	4.15±1.835	458
	Blue	3.56±1.766	458
	Total	4.48±1.819	1832
Palatability	Yellow	4.96±1.737	458
	Green	4.66±1.772	458
	Red	3.73±1.820	458
	Blue	3.22±1.684	458
	Total	4.14±1.886	1832
Highly preferences	Yellow	5.29±1.638	458
	Green	4.88±1.724	458
	Red	3.76±1.850	458
	Blue	3.25±1.824	458
	Total	4.29±1.944	1832

SD: Standard deviation

consumers associated yellow is the fittest for package (5.30), compatible (5.24), very positive package (5.24), palatable (4.96), and they preferred highest in yellow (5.29).

Calculated at alpha level 0.05, multivariate test (Table 4) results are significant for all four tests (Pillai's Trace, Wilks's Lambda, Hotelling's Trace, and Roy's Largest Root). It explains P values less than a given alpha level 0.05 and test rejects null hypothesis that assumed responses to the colors (groups) were the same in all dependent variables that were included. In other words, consumers' responses quality, intention to purchase, consumers' association of colors and word of mouth among consumers vary among the package colors. This means that some colors have greater impact than others.

Multivariate test statistics informs nothing about which groups differed from which, or whether the effect of package colors on consumers' quality perception, or consumers' likely of buying, or consumers' frequent of speaking, or other variables, or combination of them. The difference is determined by univariate test statistics presented in Table 5. Here, we focused on the source of group (color) and excluded the other sources on the tests. Last column of tests of between-subjects effects (Table 5) shows us that there was a significant difference between groups (colors) in any dependent variables (0.000).

Table 4: Multivariate test

Effect	Value	F	Hypothesis df	Error df	Significant
Intercept					
Pillai's trace	0.928	1303.686	18.000	1811.000	0.000
Wilks' lambda	0.072	1303.686	18.000	1811.000	0.000
Hotelling's trace	12.958	1303.686	18.000	1811.000	0.000
Roy's largest root	12.958	1303.686	18.000	1811.000	0.000
Group (Color)					
Pillai's trace	0.238	8.689	54.000	5439.000	0.000
Wilks' lambda	0.767	9.296	54.000	5396.882	0.000
Hotelling's trace	0.296	9.933	54.000	5429.000	0.000
Roy's largest root	0.271	27.305	18.000	1813.000	0.000

Table 5: Tests of between-subjects effects

Source	Dependent variable	Type III sum of squares	df	Mean square	F	Significant
Group (Color)	Color preferences	919.183	3	306.394	116.098	0.000
	Color likeability	874.683	3	291.561	112.523	0.000
	Quality	605.897	3	201.966	82.707	0.000
	Safety	444.221	3	148.074	58.390	0.000
	Appearance	552.133	3	184.044	75.084	0.000
	Value	501.945	3	167.315	66.810	0.000
	Likely of buying	779.530	3	259.843	98.351	0.000
	Definitely of buying	650.369	3	216.790	82.199	0.000
	Consider of buying	216.048	3	72.016	24.781	0.000
	Frequent of speaking	542.526	3	180.842	65.953	0.000
	Recommendation	680.939	3	226.980	85.137	0.000
	Encouragement	502.727	3	167.576	60.570	0.000
	Fitting	1091.159	3	363.720	126.467	0.000
	Compatibility	1014.172	3	338.057	122.439	0.000
	Positiveness	806.090	3	268.697	93.505	0.000
	Palatability	888.528	3	296.176	96.258	0.000
	Highly preferences	1246.939	3	415.646	134.006	0.000

It means that not only colors influenced different on perceived quality but also affected different on perceived safety. Moreover, there was various impact of colors on color preferences, color likeability, perceived appearance, perceived value, likely of buying, definitely of buying, consider of buying, consumer's frequent of speaking, consumer's recommendation, consumer's encouragement, fitting association, compatibility association, positiveness association, palatability, and highly preferences of consumers. Based on this result, we can conclude that the variety of color had a significant effect on types of consumer response.

5. Discussion and Implications

This study shows that in a particular region of Indonesia that remains largely unexamined, package color of local food product proved its effect on several types of consumer responses. Despite marketing weaknesses of local industry, consumers had their own consideration of package color, especially for local food product. There was an argument that food is treated as low involvement products (Grossman and Wisenblit, 1999; Kuvykaite et al., 2015). On the other hand, there are authors who argue that some consumers may view food shopping not as a low involvement action (Kuvykaite et al., 2015; Silayoi and Speece, 2004). Whether the consumers here were involved or not, package color of local food product in Indonesia significantly had different effects on consumer responses.

Among four package colors as treatments, yellow was the most influential. It was dominant in the influences than other colors. Consumers were likely associated yellow package colors to local food product more (Table 3) than other (green, red, and blue). It seems that once they linked the product with its preferences of color, quality perception, their willingness to purchase, or even their daily conversation dealing with the product, yellow came as the first package color in their minds. If the products with yellow package color were not available in the store, they would look for the same products with green package color. In this case, consumers might use their memory of this local food package color to recall. Some authors concerned about this color function on consumers for recall (Garber et al., 2000; Kahneman, 1973; Kauppinen-Räisänen and Luomala, 2010) and defined it as voluntary attention (Kahneman, 1973). The other two colors in the treatments, red and blue had the least possibility to be related to local food product in Indonesia. Based on the results in the tests of between-subjects effects, package color of local food had effects on all responses; color preferences, color likeability, quality, safety, appearance, value, likely of buying, definitely of buying, consider of buying, frequent of speaking, recommendation, encouragement, fitting, compatibility, positiveness, and highly preferences of the package.

This research enhanced the body of knowledge with respect to the impact of color on choice. It provided insights to a practitioner by confirming that the current understanding of the extent of the impact of color on consumer response. For local food product with small brands in particular region that not internationally renowned, package color was associated properly to a certain local product. In Indonesia, a region where many small brands grow with their local products, there has been no study before about examination of package color on consumers' decision-making. For this region, this study contributed the information about color in marketing that could lead to company performance in market competition. This research also had a methodological contribution. The methodological approach to address key research object is MANOVA with general linear approach, which hardly been used in previous studies. Previous studies mostly used only a univariate analysis of variance, conjoint analysis, structural equation modeling, or even qualitative approach.

References

Adams, F.M., Osgood, C.E. (1973), A cross-cultural study of the affective meanings of color. Journal of Cross-culture Psychology, 4(2), 135-156.

Alberts, W.A., van der Geest, T.M. (2011), Color matters: Color as trustworthiness cue in web sites. Technical Communication, 58(2), 149-160.

Ampuero, O., Vila, N. (2006), Consumer perceptions of product packaging. Journal of Consumer Marketing, 23(2), 100-112.

Ares, G., Deliza, R. (2010), Studying the influence of package shape and colour on consumer expectations of milk desserts using word association and conjoint analysis. Food Quality and Preference, 21(8), 930-937.
Aslam, M.M. (2006), Are you selling the right colour? A cross-cultural review of colour as a marketing cue. Journal of Marketing Communications, 12(1), 15-30.
Bellizzi, J.A., Hite, R.E. (1992), Environmental color, consumer feelings, and purchase likelihood. Psychology and Marketing, 9(5), 347-363.
Bottomley, P.A., Doyle, J.R. (2006), The interactive effects of colors and products on perceptions of brand logo appropriateness. Marketing Theory, 6(1), 63-83.
Bramklev, C. (2009), On a proposal for a generic package development process. Packaging Technology and Science, 22(3), 171-186.
Chebat, J.C., Morrin, M. (2007), Colors and cultures: Exploring the effects of mall décor on consumer perceptions. Journal of Business Research, 60(3), 189-196.
Choungourian, A. (1968), Color preferences and cultural variation. Perceptual and Motor Skills, 26(3c), 1203-1206.
Clarke, T., Costall, A. (2008), The emotional connotations of color: A qualitative investigation. Color Research and Application, 33(5), 406-410.
Cortina, J.M. (1993), What is coefficient alpha? An examination of theory and applications. Journal of Applied Psychology, 78(1), 98.
Creusen, M.E., Schoormans, J.P. (2005), The different roles of product appearance in consumer choice. Journal of Product Innovation Management, 22(1), 63-81.
Crozier, W. (1996), The psychology of colour preferences. Review of Progress in Coloration and Related Topics, 26(1), 63-72.
D'Andrade, R., Egan, M. (1974), The colors of emotion. American Ethnologist, 1(1), 49-63.
Deliza, R., Macfie, H., Hedderley, D. (2003), Use of computer-generated images and conjoint analysis to investigate sensory expectations. Journal of Sensory Studies, 18(6), 465-486.
Deliza, R., MacFie, H.J. (1996), The generation of sensory expectation by external cues and its effect on sensory perception and hedonic ratings: A review. Journal of Sensory Studies, 11(2), 103-128.
Dorcus, R.M. (1926), Color preferences and color associations. The Pedagogical Seminary and Journal of Genetic Psychology, 33(3), 399-434.
Elliot, A.J., Maier, M.A. (2014), Color psychology: Effects of perceiving color on psychological functioning in humans. Annual Review of Psychology, 65, 95-120.
Elliot, A.J., Maier, M.A., Moller, A.C., Friedman, R., Meinhardt, J. (2007), Color and psychological functioning: The effect of red on performance attainment. Journal of Experimental Psychology: General, 136(1), 154.
Field, A. (2013), Discovering Statistics Using IBM SPSS Statistics. London, England: Sage.
Frank, M.G., Gilovich, T. (1988), The dark side of self-and social perception: Black uniforms and aggression in professional sports. Journal of Personality and Social Psychology, 54(1), 74.
Funk, D., Ndubisi, N.O. (2006), Colour and product choice: A study of gender roles. Management Research News, 29(1/2), 41-52.
Gao, X.P., Xin, J.H., Sato, T., Hansuebsai, A., Scalzo, M., Kajiwara, K., Billger, M. (2007), Analysis of cross-cultural color emotion. Color Research and Application, 32(3), 223-229.
Garber, L.Jr., Hyatt, E., Boya, Ü. (2008), The mediating effects of the appearance of nondurable consumer goods and their packaging on consumer behavior. Product Experience. Amsterdam: Elsevier. p581-602.
Garber, L.L., Burke, R.R., Jones, J.M. (2000), The role of package color in consumer purchase consideration and choice. Available from: http://www.152.33.80.122/lgarber/misc/garber-package-color-consumer-choice.pdf. [Last retrieved from 2014 Sep 23].
Garber, L.L.Jr., Hyatt, E.M., Starr, R.G.Jr. (2000), The effects of food color on perceived flavor. Journal of Marketing Theory and Practice, 8(4), 59-72.
Garth, T.R. (1922), The color preferences of five hundred and fifty-nine full-blood Indians. Journal of Experimental Psychology, 5(6), 392.
Goddard, R. (1991), Identifying new ideas in packaging. Packaging Technology and Science, 4(5), 259-261.
Gollety, M., Guichard, N. (2011), The dilemma of flavor and color in the choice of packaging by children. Young Consumers: Insight and Ideas for Responsible Marketers, 12(1), 82-90.
Gordon, A., Finlay, K., Watts, T. (1994), The psychological effects of colour in consumer product packaging. Canadian Journal of Marketing Research, 13(3), 3-11.
Gorn, G.J., Chattopadhyay, A., Sengupta, J., Tripathi, S. (2004), Waiting for the web: How screen color affects time perception. Journal of Marketing Research, 41(2), 215-225.
Grossman, R.P., Wisenblit, J.Z. (1999), What we know about consumers' color choices. Journal of Marketing Practice: Applied Marketing Science, 5(3), 78-88.

Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. (2014), Multivariate Data Analysis (New International Edition ed.) Harlow: Pearson Education Limited.

Hanss, D., Böhm, G., Pfister, H.R. (2012), Active red sports car and relaxed purple–blue van: Affective qualities predict color appropriateness for car types. Journal of Consumer Behaviour, 11(5), 368-380.

Hine, T. (1995), The Total Package: The Evolution and Secret Meanings of Boxes, Bottles, Cans, and Tubes. Boston: Little, Brown.

Hsiao, S.W., Chiu, F.Y., Hsu, H.Y. (2008), A computer-assisted colour selection system based on aesthetic measure for colour harmony and fuzzy logic theory. Color Research and Application, 33(5), 411-423.

Hupka, R.B., Zaleski, Z., Otto, J., Reidl, L., Tarabrina, N.V. (1997), The colors of anger, envy, fear, and jealousy a cross-cultural study. Journal of Cross-cultural Psychology, 28(2), 156-171.

Hutchings, J.B. (2003), Expectations and the Food Industry: The Impact of Color and Appearance. New York: Springer.

Hynes, N. (2009), Colour and meaning in corporate logos: An empirical study. Journal of Brand Management, 16(8), 545-555.

Jönson, G., Johnsson, M. (2006), Packaging Technology for the Logistician. Sweden: Lund University.

Kahneman, D. (1973), Attention and effort. Englewood Cliffs, New Jersey: Prentice-Hall.

Kauppinen-Räisänen, H. (2011), The impact of salient product cues on aging adults. Journal of Medical Marketing: Device, Diagnostic and Pharmaceutical Marketing, 11(4), 294-302.

Kauppinen-Räisänen, H. (2014), Strategic use of colour in brand packaging. Packaging Technology and Science, 27(8), 663-676.

Kauppinen-Räisänen, H., Luomala, H.T. (2010), Exploring consumers' product-specific colour meanings. Qualitative Market Research: An International Journal, 13(3), 287-308.

Koch, C., Koch, E.C. (2003), Preconceptions of taste based on color. The Journal of Psychology, 137(3), 233-242.

Kuvykaite, R., Dovaliene, A., Navickiene, L. (2015), Impact of package elements on consumer's purchase decision. Economics and Management, 14(1), 441-447.

Lange, C., Issanchou, S., Combris, P. (2000), Expected versus experienced quality: Trade-off with price. Food Quality and Preference, 11(4), 289-297.

Lee, S., Rao, V.S.C. (2010), Color and store choice in electronic commerce: The explanatory role of trust. Journal of Electronic Commerce Research, 11(2), 110.

Madden, T.J., Hewett, K., Roth, M.S. (2000), Managing images in different cultures: A cross-national study of color meanings and preferences. Journal of International Marketing, 8(4), 90-107.

Margulies, W.P. (1970), Packaging Power. New York: World Publishing Company.

Marshall, D., Stuart, M., Bell, R. (2006), Examining the relationship between product package colour and product selection in preschoolers. Food Quality and Preference, 17(7), 615-621.

McDaniel, C., Baker, R.C. (1977), Convenience food packaging and the perception of product quality. The Journal of Marketing, 41(4), 57-58.

McNeal, J.U. (1973), Introduction to Consumer Behavior. New York: John Wiley & Sons, Inc.

Mehta, R., Zhu, R.J. (2009), Blue or red? Exploring the effect of color on cognitive task performances. Science, 323(5918), 1226-1229.

Moller, A.C., Elliot, A.J., Maier, M.A. (2009), Basic hue-meaning associations. Emotion, 9(6), 898.

Naz, K., Epps, H. (2004), Relationship between color and emotion: A study of college students. College Student Journal, 38(3), 396.

Ngo, M.K., Piqueras-Fiszman, B., Spence, C. (2012), On the colour and shape of still and sparkling water: Insights from online and laboratory-based testing. Food Quality and Preference, 24(2), 260-268.

Orth, U.R., Campana, D., Malkewitz, K. (2010), Formation of consumer price expectation based on package design: Attractive and quality routes. Journal of Marketing Theory and Practice, 18(1), 23-40.

Ou, L.C., Ronnier Luo, M., Sun, P.L., Hu, N.C., Chen, H.S., Guan, S.S., Treméau, A. (2012), A cross-cultural comparison of colour emotion for two-colour combinations. Color Research and Application, 37(1), 23-43.

Paine, F.A. (1990), Packaging design and performance. Pira, the Research Association for the Paper and Board, Print. and Packaging Industries.

Piqueras-Fiszman, B., Spence, C. (2011), Crossmodal correspondences in product packaging. Assessing color–flavor correspondences for potato chips (crisps). Appetite, 57(3), 753-757.

Piqueras-Fiszman, B., Spence, C. (2012), The influence of the color of the cup on consumers' perception of a hot beverage. Journal of Sensory Studies, 27(5), 324-331.

Piqueras-Fiszman, B., Velasco, C., Spence, C. (2012), Exploring implicit and explicit crossmodal colour–flavour correspondences in product packaging. Food Quality and Preference, 25(2), 148-155.

Pryke, S.R., Andersson, S., Lawes, M.J., Piper, S.E. (2002), Carotenoid status signaling in captive and wild

red-collared widowbirds: Independent effects of badge size and color. Behavioral Ecology, 13(5), 622-631.
Sable, P., Akcay, O. (2011), Response to color: Literature review with cross-cultural marketing perspective. International Bulletin of Business Administration, 11, 34-41.
Saroso, D.S., Fauzi, F. (2013), The ovop approach to improve SME's business performance: Indonesia's experience. GSTF International Journal on Business Review, 2(3), 69.
Schoormans, J.P., Robben, H.S. (1997), The effect of new package design on product attention, categorization and evaluation. Journal of Economic Psychology, 18(2), 271-287.
Shoyama, S., Tochihara, Y., Kim, J. (2003), Japanese and korean ideas about clothing colors for elderly people: Intercountry and intergenerational differences. Color Research and Application, 28(2), 139-150.
Silayoi, P., Speece, M. (2004), Packaging and purchase decisions: An exploratory study on the impact of involvement level and time pressure. British Food Journal, 106(8/9), 607-628.
Silayoi, P., Speece, M. (2007), The importance of packaging attributes: A conjoint analysis approach. European Journal of Marketing, 41(11/12), 1495-1517.
Singh, S.P., Singh, J., Grewal, G.S., Chonhenchob, V. (2012), Analyzing color on printed packaging to evaluate brand logo integrity and impact on marketing. Universal Journal of Marketing and Business Research, 1(3), 81-85.
Soldat, A.S., Sinclair, R.C., Mark, M.M. (1997), Color as an environmental processing cue: External affective cues can directly affect processing strategy without affecting mood. Social Cognition, 15(1), 55.
Soroka, W. (2009), Cpp: Fundamentals of Packaging Technology. USA: DEStech Publications, Inc.
Spence, C. (2011), Crystal clear or gobbletigook. World of Fine Wine, 33, 96-101.
Spence, C., Piqueras-Fiszman, B. (2011), Multisensory design: Weight and multisensory product perception. Proceedings of Right Weight, 2, 8-18.
Swientek, B. (2001), Uncanny developments. Beverage Industry, 92, 38-39.
Tsai, H.C., Chou, J.R. (2007), Automatic design support and image evaluation of two-coloured products using colour association and colour harmony scales and genetic algorithm. Computer-Aided Design, 39(9), 818-828.
Valdez, P., Mehrabian, A. (1994), Effects of color on emotions. Journal of Experimental Psychology: General, 123(4), 394.
Van Rompay, T.J., Pruyn, A.T., Tieke, P. (2009), Symbolic meaning integration in design and its influence on product and brand evaluation. International Journal of Design, 3(2), 19-26.
Warden, C.J., Flynn, E.L. (1926), The effect of color on apparent size and weight. The American Journal of Psychology, 37(3), 398-401.
Wuryaningrat, N.F. (2013), Knowledge sharing, absorptive capacity and innovation capabilities: An empirical study on small and medium enterprises in North Sulawesi, Indonesia. Gadjah Mada International Journal of Business, 15(1), 61.
Yüksel, A. (2009), Exterior color and perceived retail crowding: Effects on tourists' shopping quality inferences and approach behaviors. Journal of Quality Assurance in Hospitality and Tourism, 10(4), 233-254.