



The Impact of Dimensions of Packaging Aesthetics on Cosmetics Consumers' Decision Making

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Abstract:

Background: The issue of packaging plays a key role in marketing of consumable products. The user perception of the nature of the product through communication elements of packaging and its beauty has impact on the user's selection, and this is a success key for many marketing strategies.

Objectives: This study aims to investigate the impact of dimensions of packaging aesthetics on decision making by cosmetics' buyers in Iran.

Methods: To investigate buyers' views about the impact of dimensions of packaging aesthetics considering the effect of two variables of time pressure and involvement level on their purchase decision, a descriptive research was conducted using a survey field study. The study population included cosmetics' consumers in Tehran between 2012 March and January 2013. A random cluster sampling method was used and 300 questionnaires were distributed. In order to investigate the relationship between variables and analyze the information gathered from the questionnaires, one and paired-samples t-tests were performed.

Results: The graphical and physical structure and the dimensions of packaging aesthetics have an impact on the product selection ($P<0.05$). The influence of elements of packaging aesthetics on the selection is more powerful when the product involvement level among consumers is lower ($P<0.05$) and in a situation in which consumers have less time (time pressure) to select the product ($P<0.05$).

Conclusions: The graphic aesthetic packaging and the aesthetic physical structure of packaging have impact on the product selection, so industrial and manufacturing companies should consider this important issue.

Keywords: packaging design- aesthetics- cosmetics consumers- purchase decision-elements of package



Introduction:

All designers seek a trend to find solutions for aesthetics problems to design and develop of products. They try to propose designs based on that trend, thereby realizing expectations of their clients i.e. employers and buyers (Underwood, 2003). Studies show that problems and issues which designers should deal with them are more complicated than that emotions, art and creativity can solve them alone (Silayoi and Speece, 2004). Accordingly, in order to deal with the issues and problems of designing, market analysis and processing are necessary. This approach is considered as one of the most familiar trend for designers, called the form influenced by market, and its most obvious target is to convince a certain user to become interested in and buy the product (Creusen and schoormans, 2005).

The issue of packaging plays a key role in marketing of consumable products. Thus, packaging in terms of making emotional impact on a consumer can be investigated from 3 views: Aesthetics; The ability to make proper use and to create joy of the use; Reactions which are produced (social reflections) (Kupiec and Revell, 2001).

Products with a variety of packages in retail stores and large stores have provided a wide choice for consumers. The vital importance of package designing in such a competitive market is increasing, so that packaging has become a main tool for communications and branding (Madden et al., 2000). The user perception of the nature of the product through communication elements of packaging and its beauty has impact on the user's selection, and this is a success key for many marketing strategies. So, to achieve communication goals of product packaging more effectively, manufacturers should be aware of consumer response to their products packaging and adapt their design to perceptual and visual process of the consumers (Veerapong and Speece, 2005).

Attracting consumer satisfaction and creating value for consumer are significant advantages which in the business world with competition among organizations, only a very few organizations can obtain these advantages to a large extent. This requires the accurate identification of consumer and act according to his/her expectations (Silvia, 2005). Thus, the identification of consumers' preferences and behavior is a prerequisite and the first step is for obtaining a competitive advantage as a major factor for the success of an organization (Silayoi and Speece, 2007). In other words, organizations with capability and ability to identify consumer behavior and to apply the result of this identification in their activities and products compared to competitors without such a capability have a special advantage and achieve a significant performance level in the market (Underwood and Klein, 2002).

Meanwhile, the reality of the society of Iran indicates and also those who are involved in the issue of packaging also acknowledge that all packaging-related activities have being done according to certain, personal and traditional beliefs and thoughts (Ebrahimi, 2010). In this regard, fieldwork research has played no role and it seems that given the current situation, manufacturers and suppliers in the country have little understanding of advantages of aesthetics in designing and providing packages appropriate to their clients' needs and expectations.

Given the intense competition between manufacturers of cosmetic products, a company is successful which not only responds to its customers' needs but also tries to differentiate its products from competitors' products and provides a wide range of high quality services. One way to create consumers interest and differentiate a



company's products is to create a beauty image of the product among consumers which is considered as a valuable asset causing differentiation of the desired company's products from competitors' products (Givi, 2013).

This study therefore, aims to investigate the impact of dimensions of packaging aesthetics on decision making by cosmetics' buyers in Iran. We follow up the issue to find how dimensions of packaging aesthetics in different situations and among customers with various characteristics influence purchase decision process.

Methods:

The main objective of this study is to investigate buyers' views about the impact of dimensions of packaging aesthetics considering the effect of two variables of time pressure and involvement level on their purchase decision. The impact of each dimension of packaging aesthetics on consumers' purchase decision is measured. Market, in other words buyers, is investigated based on involvement level, time pressure and the priority of each studied dimension. The aesthetics theory in packaging has been used in this study.

Insert Figure1 about here.

Product packaging includes all activities of designing and producing a container for a product and performs 3 main functions: The protection of contents of the package, the provision of information and the differentiation of the product from other brands through attracting consumers' attention.

Aesthetic and visual dimensions of packaging include dimensions such as color, size, shape, graphic images and the place of images, information available on packaging, graphic font, typeface and letters on the packaging, material of packaging and the technology of packaging which mostly have impact on the emotional aspect of products and making decision on product selection.

The product-involvement level is the level at which individuals seek information about brands, evaluate product characteristics and make decision to purchase a particular brand. Thus, if the product or purchase decision is not important, the involvement level is low (Silayoi and Speece, 2004).

Time pressure frequently has impact on individuals' purchase decision and many consumers do not have enough time to read products labels and what have been written on them. They often seek standardized shapes of labels, just the larger letters of texts and the use of color codes for more visualization of information and accordingly, rapid processing of information.

This descriptive research was conducted using a survey field study and also according to the objectives of the study, it is an applied study, because in conducting studies such the current study, the researcher describes statistical population variables and investigates views of participants about studied features.

The study population included cosmetics' consumers in Tehran between 2012 March and January 2013.

A random cluster sampling method was used in this study, so that first the statistical population of the city of Tehran was divided into 3 clusters, then 5 stores of each cluster were selected using simple random method (15 stores in total) and finally 20



buyers in each store were selected consecutively (300 buyers in total). Participation in the study was voluntarily and verbal consent obtained before completing the questionnaire.

The following formula was used for sample size calculation with the precision of estimate (e) of 0.06 and CI of 95%.

$$n = \frac{(z)^2 pq}{e^2} = \frac{(1.96)^2 \times 0.5 \times 0.5}{0.06 \times 0.06} = 266.67 \approx 270$$

In this study, 300 questionnaires were distributed and 290 questionnaires out of the returned ones were proper for the study. The return rate of questionnaires was 96.67 which is a proper and acceptable rate.

Information was gathered through two ways:

A) Library studies: To gather information about the theoretical and research literature on the subject, library sources (English and Persian articles, available and relevant research, relevant books regarding the issue of aesthetics and packaging, research methodology and statistical books) were used.

B) Fieldwork: In this section of the study, questionnaires were distributed. The researcher drafted questionnaire was distributed among 30 persons for pretest, and after testing the reliability, the Cronbach's alpha was calculated to be 0.86. To ensure the validity of the questionnaire, the designed questionnaire was sent to a number of experts in this field, and amendments were made based on their comments and views and the final version of questionnaire was distributed among the study population. After measuring reliability and validity, the final questionnaire was distributed among 300 persons and 290 questionnaires out of the completed ones were suitable and used in statistical analyses.

The questionnaire included 5 demographic questions, 24 multiple-choice questions related to proposed assumption.

A 5-point Likert scale was used in designing the questionnaire, so that the value of 5 was assigned to the option of very high (strongly agree) and the value of 1 was assigned to the option of very low (strongly disagree).

In this study, in order to investigate the relationship between variables and analyze the information gathered from the questionnaires, one and paired-samples t-tests were performed using SPSS 16.0 software and other appropriate statistical methods.

Findings:

According to the results of the study, 32% of the respondent were male and 68% were female. Given the results gathered from the questionnaires, about 7% of respondents were under 18 years of age, 57% were between 18 and 38 years of age, 32% were between 38 and 58 years of age and 4% were over the age of 58 years. Also, 13% of the respondents were employee, 19% were businessperson, 29% were students, 31% were housewife and the remaining 8% had other jobs. None of the respondents were in the category of education below high school, 47% had a high school diploma, 4.5% had an associate's degree, 36% had a bachelor's degree, 11% had a master's degree and 1.5% had a doctorate degree. The income of about 6% of the respondents was less than 3500000 Iranian Rials, 23% were with a monthly income of 3500000 to 7000000 Iranian Rials, 52% were with a monthly income of 7000000 to 10000000



Iranian Rials and the income of 19% of the respondents was more than 10000000 Iranian Rials.

It should be noted that given that in some cases buyers (men in particular) may not be the users of product and users may be their wife or family members and also some women are housewife having no independent income, in the questionnaire, the housewives were asked to mention the family income (husband) as the income rate.

1. Elements and dimensions of packaging aesthetics have impact on the product selection.

Insert Table 1 about here.

Since p-value is zero (close to zero) and less than 0.05, therefore the results show that graphical and physical structure and the dimensions of packaging aesthetics have an impact on the product selection.

2. The impact of dimensions of visual aesthetics of packaging at low product involvement level

Insert Table 2 about here.

Insert Table 3 about here.

Since p-value is zero(close to zero) and less than 0.05, therefore the results show that the influence of elements of packaging aesthetics on the selection is more powerful when the product involvement level among consumers is lower.

3. The impact of dimensions of visual aesthetics of packaging considering time pressure for individuals

Insert Table4 about here.

Insert Table 5 about here.

Since p-value is zero(close to zero) and less than 0.05, therefore the results show that the influence of elements of packaging aesthetics on the selection is more powerful in a situation in which consumers have less time (time pressure) to select the product.

Discussion and Conclusion:

In this study, the impact of aesthetics' dimensions of cosmetics packaging was studied and the influence of each dimension on purchase decision among customer was measured and prioritized. Furthermore, the general impact of aesthetics' dimensions in terms of two variables including time pressure and product involvement level was studied and investigated.

The main objective of this study was to investigate the impact of dimensions of packaging aesthetics on a buyer's decision as well as the level of the impact at different product involvement levels and time pressure.



According to the results of statistical tests and the measurement of the aesthetic dimension of graphic structure and the aesthetic dimension of physical structure, the hypotheses were confirmed as follow:

- The graphic aesthetic packaging has impact on the product selection.
- The aesthetic physical structure of packaging has impact on the product selection.

The results of the study shows that:

1. Elements and dimensions of packaging aesthetics have impact on the product selection.

The higher or lower viewpoints' mean score than the average score of population indicates that these elements and dimensions of aesthetics have had impact on customers' decision. Since the viewpoints' mean score about graphical and physical structure of packaging is higher than the average of the population, so it can be said that these elements of aesthetics have had positive impact on product selection by buyers.

2. The influence of elements of packaging aesthetics on the selection is more powerful when the product involvement level among consumers is lower.

The difference between means of statistical population considering the variable at a low product involvement level is higher than when the involvement level in purchase decision has not been taken into account.

3. The influence of elements of packaging aesthetics on the selection is more powerful in a situation in which consumers have less time (time pressure) to select the product.

The difference between means of statistical population when the variable of time pressure is considered has been higher than when this variable has not been taken into account.

Also the results show that:

- The impact of aesthetic elements of graphical structure on purchase decision was greater than the impact of elements of physical structure.
- The variable of product involvement level in selection and purchase decision by customers was more influential than the variable of time pressure.
- The gender chart of the respondents shows that among the people buying cosmetics in this study, women are more than two fold of men.
- The age chart of the respondents shows that more than 50% of cosmetics' buyers are those who were between 18 and 38 years of age.
- Through investigating the results of the questionnaires gathered from the respondents, it can be concluded that about one third of the population of cosmetics' buyers are students and one third is housewives.
- According to the investigation of the study population, it can be said that most respondents and cosmetics' buyers are those having a high school diploma (47%) and a bachelor's degree (36%).
- More than half of those responded to the questionnaires mentioned that their income is 7000000 to 10000000 Iranian Rials. It is worth noting that in the questionnaire, the housewives were asked to mention the income of their husbands or householders. Because the aim of this question was to identify and categorize income levels of families but not the personal income of individuals. In some cases, it has been also seen that someone bought the cosmetics who has not been the end user of



that product and has bought that product based on the order of the spouse or family members.

A study by Reimann et al. demonstrated that aesthetic packages considerably increase the reaction time of customers' choice responses. They concluded that product differentiation by design is an essential key for marketing managers and unknown brands differentiated by aesthetic packaging design have the chance to be the first choice of customers, even if the well-known, branded product presents a considerable competition (Reimann et al., 2010).

A study by Mahajan et al. about the role of packaging on customer's buying behavior showed the impact of package and its elements on customer's purchase decision. Main package's elements should be identified and analyzed: graphic, color, size, form, material of packaging and printed information. Also, this suggested that the impact of package elements on customers purchase decisions should be evaluated on the basis of consumer's involvement level, time pressure or individual characteristics of consumers. It has shown that elements of package are the most important for customer's purchase decision (Mahajan et al., 2013).

The results of mentioned studies are approximately similar to our results and also, it is suggested that:

- According to the results of the analysis, it was seen that aesthetic elements have a significant impact on buyers' decision making, so industrial and manufacturing companies should consider this important issue. This is also true in the cosmetics industry, in particular, in which most consumers are women, and this group of individuals pays more attention to emotional aspects of a product when buying.
- In supermarkets and large stores, if the dimensions and elements of aesthetics in packaging are considered in a way appropriate to the target market and the culture of this market, may have significant impact on purchase decision, especially at low product involvement level for individuals to select between different products or brands and fancy purchase.
- According to the results of this study and the priority to graphical elements rather than aesthetics physical structure, activists in the industry are recommended to pay special attention to graphical dimension of packaging when designing products' packages.
- At present, given the rapid events and time pressure for people in society which are mostly due to the mechanical life throughout the world, there is a good opportunity for marketers to use aesthetics elements in designing products' packages, so that they would be able to be influential in the shortest time possible and convey their message to buyers in the form of colors and symbolic images in order to influence their purchase decision.



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Table 1- One-sample t-test of dimensions of visual aesthetics of packaging

Group Statistics					one-sample T test				
dimensions of visual aesthetics	number	Mean	standard deviation	Standard error mean	Degrees of freedom (df)	T	Sig.	95% Confidence interval of the difference	
								Lower	upper
Color	290	4.3552	0.60682	0.03563	289	38.031	0.000	1.2850	1.4253
Images	290	4.5931	0.53262	0.03128	289	50.936	0.000	1.5315	1.6547
Typeface	290	3.2517	0.66713	0.03918	289	6.426	0.000	0.1746	0.3288
Shape	290	4.2966	0.71682	0.04209	289	30.802	0.000	1.2137	1.3794
Size	290	3.2310	0.70471	0.04138	289	5.583	0.000	0.1496	0.3125
Material	290	3.3241	0.77489	0.04550	289	7.123	0.000	0.2346	0.4137
Graphical dimensions	290	4.0667	0.33984	0.01996	289	53.450	0.000	1.0274	1.1059
Physical dimensions	290	3.6172	0.50626	0.02973	289	20.763	0.000	0.5587	0.6758
The mean of packaging aesthetics dimensions	290	3.8420	0.37897	0.02225	289	37.83	0.000	0.7982	0.8858

Table 2- One-sample t-test of dimensions of visual aesthetics of packaging at low product involvement level

Group Statistics					one-sample T test				
dimensions of visual aesthetics	number	Mean	standard deviation	Standard error mean	Degrees of freedom (df)	T	Sig.	95% Confidence interval of the difference	
								Lower	upper
Color	290	4.7448	0.44456	0.02611	289	66.837	0.000	1.6934	1.7962
Images	290	4.9069	0.29108	0.01709	289	111.561	0.000	1.8733	1.9405
Typeface	290	3.3483	0.72956	0.04284	289	8.129	0.000	0.2640	0.4326
Shape	290	4.7034	0.50085	0.02941	289	57.919	0.000	1.6456	1.7613
Size	290	3.3586	0.73636	0.04324	289	8.294	0.000	0.2735	0.4437
Material	290	3.8001	0.74963	0.04402	289	18.174	0.000	0.7134	0.8867
The mean of packaging aesthetics dimensions	290	4.1437	0.33080	0.01943	289	58.877	0.000	1.1054	1.1819



Table 3- Paired samples T- test of dimensions of visual aesthetics of packaging at low product involvement level

dimensions of visual aesthetics	Paired Differences					Degrees of freedom (df)	T	Sig.
	Mean	standard deviation	Standard error mean	95% Confidence interval of the difference				
				Lower	upper			
The mean of packaging aesthetics dimensions (2 situation)	0.3017	0.2767	0.0162	0.2697	0.3337	289	18.56	0.000

Table 4- One-sample t-test of dimensions of visual aesthetics of packaging considering time pressure for individuals

Group Statistics					one-sample T test				
dimensions of visual aesthetics	number	Mean	standard deviation	Standard error mean	Degrees of freedom (df)	T	Sig.	95% Confidence interval of the difference	
								Lower	upper
Color	290	4.6069	0.51680	0.03035	289	52.950	0.000	1.5472	1.6666
Images	290	4.8586	0.34901	0.02049	289	90.687	0.000	1.8183	1.8990
Typeface	290	3.2517	0.65668	0.03856	289	6.528	0.000	0.1758	0.3276
Shape	290	4.5310	0.60626	0.03560	289	43.006	0.000	1.4610	1.6011
Size	290	3.3276	0.69571	0.04085	289	8.019	0.000	0.2472	0.4080
Material	290	3.3241	0.78817	0.04628	289	7.003	0.000	0.2330	0.4152
The mean of packaging aesthetics dimensions	290	3.9833	0.34719	0.02039	289	48.232	0.000	0.9432	1.0235

Table 5- Paired samples T- test of dimensions of visual aesthetics of packaging considering time pressure for individuals

dimensions of visual aesthetics	Paired Differences				Degrees of freedom (df)	T	Sig.
	Mea n	standar d deviati on	Standard error mean	95% Confidence interval of the difference			
				Lower			



					er			
The mean of packaging aesthetics dimensions (2 situation)	0.14 13	0.2007	0.0117	0.11818	0.16 458	289	11.9 9	0.000

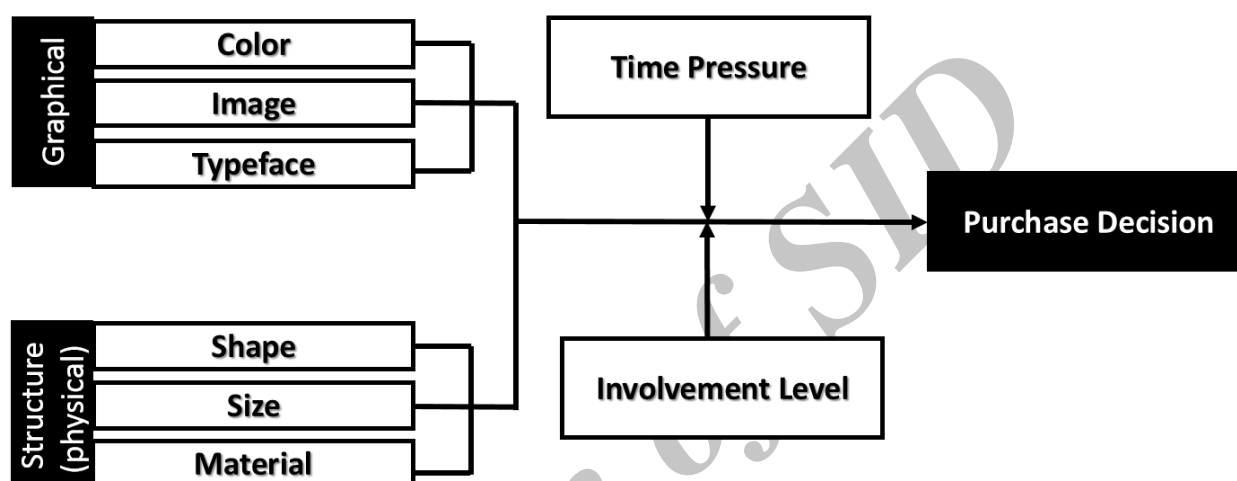


Figure1- The conceptual model of packaging elements and product choice (Silayoi and Speece, 2004)