

Volume 8 Nomor 2, December 2021 p-ISSN 2339-191X | e-ISSN 2406-9760 p 161 – 173

# The Effect of Mineral Water Packaging Designs on Level of Consumer Decision in Purchase

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#### **Abstract**

The function of packaging is to wrap or protect a product. It has a role in informing various things related to a product, such as the type of product, product quality, benefits, and product image. Through packaging design, consumers are also assured that the packaged products are more secure, healthy, and safe. Excellent and attractive packaging design can foster positive consumer perceptions of the product. This positive perception of consumers can have an impact on certain decisions on consumers. The emergence of various mineral water bottle brands is currently causing intense competition to win the hearts of consumers. Various ways have been made to attract consumer interest, one of which is through packaging design. Packaging design is considered one of the ways to shape perceptions and improve consumer decisions to buy. Besides, the perceptions that have been formed can help improve or decrease the brand image. This study aims to determine consumer perceptions of the form of mineral water packaging design marketed in Indonesia. Through this research, the information will be obtained that can be used as a reference regarding packaging design and to determine consumer perceptions of purchasing decisions for a product. The method used in this research is a qualitative method, supported by quasi data (quantitative experimental) with an aesthetic approach (design). Through packaging design elements such as color, shape, brand, and logo, illustration, and typography will form perceptions in the minds of consumers regarding the suitability of the product with the packaging. Thus, packaging design has the power to introduce products to consumers, help improve purchasing decisions, and can provide correlated value to form a brand image in the eyes of consumers.

**Keywords**: packaging design; mineral drink; consumer perception; buying decision

#### Pengaruh Desain Kemasan Air Mineral terhadap Tingkat Keputusan Konsumen dalam Pembelian

#### Abstrak

Fungsi kemasan tidak hanya untuk membungkus atau melindungi sebuah produk, tetapi juga berperan mengomunikasikan/menginformasikan berbagai hal terkait dengan sebuah produk, seperti jenis produk, kualitas produk, manfaat, dan citra sebuah produk. Melalui desain kemasan pula konsumen diyakinkan bahwa produk yang dikemas lebih terjamin keamanan, kesehatan, dan keselamatannya. Desain kemasan yang baik dan menarik dapat menumbuhkan persepsi positif konsumen terhadap produk. Persepsi positif konsumen ini dapat berdampak pada keputusan tertentu pada konsumen. Munculnya berbagai merek minuman mineral kemasan saat ini menimbulkan persaingan yang ketat untuk saling merebut hati konsumen. Berbagai cara telah dilakukan untuk menarik minat konsumen/pasar, salah satunya melalui desain kemasan. Desain kemasan dianggap merupakan salah satu cara yang mampu membentuk persepsi dan meningkatkan keputusan konsumen untuk membeli. Selain itu, persepsi yang telah terbentuk dapat membantu meningkatkan atau menurunkan citra merek suatu produk. Penelitian ini bertujuan untuk mengetahui persepsi konsumen terhadap bentuk desain kemasan minuman mineral yang dipasarkan di Indonesia.

Melalui penelitian ini pula akan diperoleh informasi yang dapat menjadi rujukan terkait desain kemasan dan untuk mengetahui persepsi konsumen terhadap keputusan pembelian terhadap suatu produk. Metode yang digunakan dalam penelitian ini adalah metode kualitatif, didukung data quasi (kuantitatif eksperimen) dengan pendekatan estetika (desain). Melalui elemen desain kemasan seperti: warna, bentuk, merek dan logo, illustrasi, dan tipografi akan membentuk persepsi pada benak konsumen mengenai kesesuaian produk dengan kemasan. Dengan demikian, desain kemasan mempunyai kekuatan untuk mengenalkan produk pada konsumen, membantu meningkatkan keputusan pembelian, serta dapat memberikan nilai yang berkorelasi membentuk citra merek di mata konsumen.

**Kata kunci**: desain kemasan; minuman mineral; persepsi konsumen; keputusan pembelian

## **INTRODUCTION**

This study departs from a researcher experience, but it may also be the experience of other people or families when shopping at a supermarket or store for their daily needs. When choosing a particular product, sometimes you face various brand choices, resulting in different choices and leading to discussions before buying. For example, when choosing a bath soap product, the choices of girls and boys can be different, and the choices of their mothers and their fathers are very different. The packaging on a product provides a visual perception and impact that is not simple when consumed by the public or potential consumers. Perceptions, background knowledge, and references that a person has given a considerable contribution to one's behavior when viewing a product through its packaging. Some are attracted by the shape, while others are attracted by the visualization of the labels on the packaging, others are attracted after seeing and reading the content. Some consumers are fanatical and loyal to certain brands/brands regardless of the various forms and packaging designs.

The radical development in the design world in 2020 has not yet reached its peak, but academic attention to the correlation between packaging design consumption and purchasing decisions is still minimal. An act of buying (consumption) is the goal of the producer's efforts in marketing its products. Determining the business's strategy must be based on the ability to be oriented to the utilization of aspects with optimal methods. For this strategy to be successful, it requires an understanding of the environment and adaptation to environmental changes, the social, economic, political, and ecosystem (Hartanto, 2009: 158).

To achieve maximum sales results, producers make various efforts to attract customers, both economically (discounts, etc.) and in the design of advertisements and product packaging. Various promotional actions are also carried out to make consumers interested in the products offered, so an interesting way of communication is needed. Based on this, brand awareness is created (Kurniawan, 2018: 43). Brand awareness is the public awareness of a brand/brand (Makmur,

2018: 12). The various efforts made by producers cannot be separated from the packaging design of the products they sell, both visually and ergonomically.

Besides, it also requires the attractiveness of products being sold with packaging as a primary trigger because it directly faces the target audience. Therefore, packaging must be able to intervene with consumers to provide an incentive to buy. Apart from being a product wrapper, the packaging is expected to provide an overview of the advantages of a product and make consumers feel that the product is worth buying. Therefore, the packaging must have the ability to compete with its rivals. Based on observations on phenomena, the sense of sight has a considerable role in making decisions. That is why graphic and ergonomic elements have a fundamental visual communication process. For example, equal drinking water with a packaging design in the shape of a wine bottle with a dark green color which reflects that the main ingredients of the product's maker are natural and very exclusive like wine, besides that the green color can also describe a soft and fresh feel. Even though it is priced quite high, it is proven that the product can influence the target audience.

Drinking water is a primary human need; apart from being 80% of the human body consisting of water, water is always needed in a tropical country like Indonesia, which has a reasonably warm temperature. The number of competitors results in more consumer choices to choose products that match their expectations. Consumers become more careful in choosing products on the market to obtain the uses and benefits they are looking for. To be able to satisfy consumers, one of the advantages of competing is product quality. Quality must be measured from the consumer's point of view of the quality of the product itself; therefore, the quality of the product must meet the needs and desires of the customer. This condition forces companies to maintain and improve quality to compete, resulting in the emergence of many bottled drinking water producers who compete with each other and win consumers' hearts. However, not all producers can optimize packaging design, both graphically and ergonomically.

This research aims to identify indicators of attractive mineral drink packaging design according to consumers. Analyze the elements of packaging design based on these indicators to improve the design quality to increase competitiveness. Thus, through this research, the researcher can provide references related to packaging design to determine consumer perceptions of purchasing decisions based on the form of product packaging design. The Quasi method in data collection in this study was chosen to obtain rich and fascinating data to be absorbed. Experiments were conducted on 30 respondents who meet the criteria and have been determined with the arranged product conditions but do not forget that each individual is unique and has an unconditional character.

Meanwhile, data analysis was carried out using an aesthetic approach (design), hoping that packaging design has the power to create a correlation with decisions. Mixed methods like this have not been widely used, and researchers must present the data as informative as possible. This is both a challenge and an opportunity for society today.

The emergence of various forms of packaging design with various types and brands of bottled mineral water products can cause competition, resulting in difficulty for a product to maintain itself as a market leader. To survive, it requires a packaging design that attracts consumers through packaging design elements such as color, shape, brand, logo, illustration, and typography. These elements will form perceptions in the minds of consumers. A good perception of potential consumers will certainly be able to influence purchasing decisions on these products. Therefore, the research question is: How are the elements in the packaging design of mineral drink bottles that can attract the target audience. Besides, this study also questions how consumers perceive purchasing decisions based on the packaging design of mineral water product bottles.

#### METHODS AND APPROACHES

#### 1. Research Methods

The type of research in this paper is quasi-experimental with causality and descriptive format as a continuation with aesthetic analysis (design). Causality research attempts to test the correctness of the causal relationship (cause-and-effect), namely the relationship of the independent variable (which influences) or the packaging design with the dependent variable (which is influenced), in this case, the purchase decision. This aims to test the truth of a hypothesis, which is carried out through quasi data collection (Sugiyono, 2009: 57).

## 2. Research Subjects and Objects

## a) Research subject

Respondents are a population with specific characteristics defined by the researcher as the core of learning, which then concludes (Sugiyono, 2009). The subjects in this study were teenagers in Yogyakarta.

#### b) Research Object

The object of research is at the core of the problem in research (Arikunto, 2006). The object of this research is the packaging design of 600 ml of mineral water products.

#### 3. Research Variable

Research variables are all things that have been determined as the focus of research so that all the information needed to support the conclusion is obtained (Sugiyono, 2009: 38). The variables used in this study are:

- a. The dependent variable in this study is buying interest in mineral water products (Y)
- b. The independent variable in this study is the packaging design (X).

# 4. Operational Definition

The operational definition explains the variables and terms used in research to make it easier for respondents and readers to interpret the research variables.

- 1) Packaging Design (X):
- a. Graphic Design (X1)

Graphic design is a form of visual decoration on the packaging surface. It consists of four dimensions, namely brand name, color, typography, and image.

b. Design Structure (X2)

The design structure is related to features and ergonomics in packaging construction, divided into three dimensions, namely shape, size, and material.

c. Product Information (X3)

In a package, some elements build a brand image in a communication business that provides information on products to help consumers make purchasing decisions.

## 2) Purchase decision (Y)

According to Kotler (2009), purchasing decisions are a series of elements that describe how consumers choose a product to buy. The definition of aspects of purchasing decisions proposed by Kotler introduces the problem; information search, alternative assessment, buying decision. The author's post-purchase behavior is processed into aspects of variable consideration, namely:

a. Transactional (Y1)

Transactional is an individual decision to buy a product.

b. Referential (Y2)

Referential is an individual encouragement to provide product references for others.

c. Preferential (Y3)

Preferential is a tendency towards preferential behavior in a product.

d. Explorative (Y4)

Explorative is the tendency of individual behavior to deepen information about the product of their interest.

# 5. Population and Sample

## 1) Population

The population can be defined as an area of generalization: objects/subjects with specific causality or characteristics designated as learning resources. Based on this understanding, the population in this study were teenagers in Yogyakarta with adolescence. Meanwhile, based on quasi research, the researcher will not control the respondents by default other than to give respondents the freedom in the hope of obtaining rich and accurate data.

## 2) Samples

The number of subjects taken in this study was 30 subjects considering that the sample size would indeed be better, but it required at least 30 samples (Cohen, et al., 2007: 101). This is also supported by the statement (Baley; Mahmud, 2011: 159) that the minimum sample size in research with statistical analysis is 30. Roscoe also stated that if the sample is divided into one category, it must have at least 30 sample members (Sugiono, 2009: 91). A quasi-deep experiment was analyzed descriptively correlational with a minimum sample of 30 respondents (Mahmud, 2011: 159).

## 6. Sampling Technique

The sampling technique used in this study used a non-probability sample; that is, not all population members have the same opportunity to be a sample in the study (Prasetyo & Jannah, 2008). Sampling was done by the purposive sampling method because the selected sample was based on specific characteristics or traits (Prasetyo & Jannah, 2008). The number of respondents used in this study amounted to 30 people who have the following criteria:

- 1. Adolescents aged 20-26,
- 2. Teenagers domicile in Yogyakarta,
- 3. Ever bought bottled water.

## 7. Data Collection Technique

The method used by researchers in data collection is a scale. The scale used is a closed scale, in which the researcher limits the respondent's response. While the question items will be asked verbally by the researcher after the experimental protocol has been implemented with questions that are processed based on the definition of the two variables.

The purchase decision indicator used in this study is an indicator based on Kotler, which is reprocessed. Based on this, purchasing decisions are divided into four dimensions, namely: transactional, referential, preferential, explorative, which are reprocessed into questions as the scale of the research carried out. The empirical mean value is obtained using the following calculation:

 $\mu = \Sigma x$ : n

 $\mu$  = Empirical mean

 $\Sigma x = Total value$ 

n = Number of items

Meanwhile, to find the theoretical mean value, the following calculations are used:

 $\mu$  = Theoretical mean

I\_maks = Maximum item value

I min = Minimum item value

 $\Sigma K =$ Number of Stage items

The theoretical mean that is owned on this scale can be stated after being implemented after the try-out. This value is obtained using the formula above with a minimum value of item 1, a maximum value of item 4 and a valid number of items. The number of items used is the number of statement items used after the try-out.

The value on the scale is obtained according to the response given by the respondent to each statement. The value assigned is also determined by the type of statement on the scale. There are two types of statements in the scale of this research, namely Favorable and Unfavorable. Response options on the scale are STS ("Strongly Disagree"), TS ("Disagree"), S ("Agree"), SS ("Strongly Agree").

Researchers do not provide N (Neutral) answer choices to avoid the tendency of respondents to fill in neutral choices, so that data on differences from respondents becomes less informative (Azwar, 1999).

## 8. Validity and Reliability of Measuring Instruments

## 1) Validity

Validity is the accuracy and precision of measuring instruments as a scale in providing measurement results and carrying out measurement functions by measurement objectives (Azwar, 2012).

# 2) Item Analysis

In item selection, the most crucial parameter is the item discrimination power. Item discrimination power is the extent to which items can distinguish between individuals and groups of individuals who have and do not have the attributes to be measured.

## 3) Reliability

Azwar (2012) explains that reliability is the consistency of measurement so that it can be trusted. Measurements that have a high-reliability value can be said that measurements are reliable.

## 9. Data Analysis Method

Before the data is analyzed, the data obtained will be processed statistically. After the data is obtained through the items submitted to the respondents, the next step is tabulation, or it can be interpreted as scoring by the system applied. Scoring is done using a Likert scale.

## 1. Test Assumptions

Besides, it is necessary to test assumptions as a form of accountability for the results obtained.

## a. Normality test

The normality test is a test carried out on research data to check the research data conducted by researchers from a normal distribution population (Santoso, 2010). This normality test can be performed using the Kolmogorov-Smirnov analysis.

## b. Homogeneity test

The homogeneity test is a test carried out on research data to see whether the assumptions in the research variant are the same or not. This homogeneity test was carried out using the Levene Test analysis. If the variants in this study are the same, the t-test will use the Equal Variance Assumed column value. If the variants in this study are different, the t-test will use the Equal Variance Not Assumed value. This is done by looking at the significant value in the t-test results. If the significance value is more than 0.05, it can be concluded that the data come from populations that have the same variant. In contrast, if the significance value is less than 0.05, it can be concluded that the data come from populations that have different variants (Priyanto, 2012).

## 2. Descriptive Analysis

Descriptive analysis of the data obtained in this study will be processed comprehensively by researchers as professionals in visual communication and practitioners in the visual arts. An objective analysis with a comprehensive aesthetic approach is expected to reach a saturation point for research results and become a reference for both producers and consumers in criticizing mineral water products.

## RESULTS AND DISCUSSION

#### 1. Respondent Description

Before going into the field to collect research data, the researcher first conducts a literature study, observes potential respondents and ensures that respondents are willing to be involved in this research. Meanwhile, the research respondents were randomly assigned with the snowball sampling technique. As for prospective research respondents, according to the criteria of respondents who have been determined. In researching adolescents aged 20-26 years, researchers

continued to collect data orally to maintain the study's validity and the equality of treatment in the two groups of respondents. Respondents in this study were 30 teenagers in the Yogyakarta region. The number 30 is obtained from the requirements for quantitative experimental research to meet the research methodology requirements.

Group Statistics			
Group	N		
N	30		

## 2. Test results

## a. Normality test

Based on the Kolmogorov-Smirnov analysis using SPSS 22.0 in the overall research results, a significance value of 0.200 was obtained. The significance value (p) is more significant than 0.05, so it can be said that the data used are normally distributed. Thus, the data collected can be ascertained to represent the sample population used.

Normality test One-Sample Kolmogorov-Smirnov Test

		Buying decision
N		50
Normal	Mean	74.16
Parameters <sup>a,b</sup>	Std. Deviation	12.035
Most Extreme	Absolute	0.096
Differences <b>Positive</b>		0.096
	Negative	-0.051
Test Statistic		0.096
Asymp. Sig. (2-tailed)		0.200 <sup>c,d</sup>

- a. Test distribution is Normal
- b. Calculated from data
- c. Lilliefors Significance Correction
- d. This is a lower bound of the true significance.

#### b. Reliability Test

Meanwhile, the results of the Cronbach Alpha test on the overall research results show the number 0.851. This figure is higher than the table with a significance of 1%, namely 0.361, and 5%, namely 0.279. Thus, it can be said that the scale used in this study has been proven reliable.

~		
Statistic	Relighilities	

Cronbach's Alpha	N of Items
0.851	38

# c. Homogeneity Test

Based on the homogeneity test results using SPSS 22.0 with the Levene's Test for Equality of Variances technique, a significance value of 0.943 was obtained. This figure is more significant than 0.05, so that the research data can be said to be homogeneous. Thus, the data qualifies for the t-test.

Homogeneity Test				
SCORE	Levene's Test for Equality of Variances			
	F	Sig.		
Equal variances assumed Equal variances not assumed	0.005	0.943		

#### 3. Research data

The results showed that the empirical mean in the group was 98.88, with a standard deviation of 10,826. The lowest total score obtained in the group obtained the lowest total score was 63, and the highest total score was 143.

On the other hand, based on the calculation using the formula listed, the empirical mean of the two groups of respondents, which is higher than the theoretical mean, indicates that the group of respondents both have a high level of purchasing decisions due to the effect of packaging design.

Group Statistics				
Group	N	Mean	Std. Deviation	Std. Error Mean
N	30	98.8800	10.82559	2.16512

<b>Product Selection Statistics</b>				
Product	N of Items			
	Male	Female		
2 Tang	1	0		
Le Minerale	3	9		
Vit	0	0		
Oasis	2	0		
Nestle	2	1		
Ades	0	1		
Crystaline	2	3		
Club	0	0		
Aqua	4	1		
Prima	1	0		
TOTAL	15	15		



## 4. Hypothesis Testing

It is testing the hypothesis in this study using the Independent Sample T-test method. Obtained a significance of 0.111. The value is more significant than 0.05, so it can be said that there are no differences in scores between subjects.

Independent Sample Test								
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Con Interval Differ	of the	
			(= :::=::)	21101010		Lower	Upper	
Equal variances assumed	-1.625	48	0.111	-5.44000	3.34833	-12.17227	1.29227	
Equal variances not assumed	-1.625	46.747	0.111	-5.44000	3.34833	-12.17694	1.29694	

From the respondents' answers above, it can be used to determine the responses given by respondents to aspects of packaging design (graphic design; design structure; and product information) as factors that influence the purchase of bottled mineral water in Yogyakarta. Based on the data collected, the answers from respondents have been recapitulated and then analyzed to find out the description of each aspect.

The results of respondents' assessment of the packaging aspects of mineral beverage product design can be seen in the table above. Based on the table above, it can be explained that of the 30 respondents, on average, they gave the most and highest ratings to Le Minerale. Thus, it shows that the design aspects of mineral water products can provide a significant influence to assess Le Minerale as having an excellent visual appeal in Yogyakarta. Judging from the results of research results that have been obtained from the field, as stated by Aaker (2004), it is said that the design on the packaging is an image of the brand which can be said to be a company promise to consistently provide certain values, benefits, and features for buyers. The packaging design in this study is an effort to build a company image in providing a perception of good quality that is easy for consumers to remember; the indicators can be seen in 1) The graphic design aspect is a visualization that is on consisting of brand name, color, typography, pictures/illustrations; 2) The design structure related to features and ergonomics in packaging construction can be divided into three dimensions, namely shape, size, and material; 3) The product information aspect, where the elements that build the brand image in the communication business provide information from the product to help consumers make purchasing decisions.

Meanwhile, the purchase decision is a problem-solving in human activities to buy goods or services in fulfilling their wants and needs, which consists of identifying needs and wants, searching for information, evaluating purchasing alternatives, purchasing decisions, and behavior after purchase. According to Kotler (2009), purchasing decisions are a series of elements that describe how consumers decide in choosing a product to buy based on variable considerations: 1) Transactional is individual decisions to buy mineral drink products; 2) Referential is an individual encouragement to provide product references for others; 3) Preferential is a tendency towards preferential behavior in a product; 4) Exploratory is the tendency of individual behavior to deepen information about the product of their interest.

#### CONCLUSION

This research was carried out in conjunction with the COVID-19 outbreak/pandemic situation so that it slightly impeded getting data in interviews to dig and get data. This technical obstacle is related to the implementation of research in the field and the relatively short period of the research implementation (effective time is only two and a half months/mid-June to September 2020). However, the research results show that there is no difference in scores between respondents, so it can be concluded that all respondents show a positive correlation between purchasing decisions and packaging design on mineral water bottles. Meanwhile, *Le Minerale* was first with 13 voters, followed by *Crystaline* and *Aqua*, whom five

respondents chose. These mineral water packages have an unusual shape in other packaging bottles, so this provides a point of interest on the mineral drink shelf and storefront so that potential consumers are interested in seeing and buying it.

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