# PRODUCT ATTRIBUTES DETERMINE THE PREFERENCE OF HERBAL MEDICINE CONSUMERS

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**Abstract:** The emergence of a wide variety of herbal products requires marketers to better understand consumer behavior. The various brands offered make consumers tend to have certain preferences before making a purchase decision. This study aims to determine the attributes of herbal products that determine the level of consumer preference in the purchasing process and the closeness of these attributes to consumer preferences. The method used is a survey through interviews with consumers. Data collection was carried out on 60 samples using accidental sampling technique which was then processed and analyzed in conjunction to determine the most important attributes for consumers in making purchases. The results showed that the order of attributes in the purchase of herbal medicine, the most important are the properties, price, expiration time, and packaging. There is a close relationship between the combination of attributes studied and consumer preferences for herbal medicine. This study is limited to four attributes and does not use ranking ratings on stimuli or combinations of consumer behavior attributes. The uniqueness of this research is analyzing the attributes simultaneously.

**Keywords:** Herbal medicine product attributes, consumer preferences, conjoin analysis, level of importance

## 1. INTRODUCTION

# 1.1. Background

Medicinal plants are one type of plant that is proven as a natural ingredient in the pharmaceutical industry. This commodity has many species scattered throughout the archipelago, so that it has the potential to be developed as a source of raw materials for herbal medicine and modern medicine. Medicinal plants in Indonesia represent 90% of medicinal plants in the Asian region (Lestari E and Lagiono, 2018). The use of medicinal plants is not only in primary form but also in secondary form / simplicia and extracts. The development of this medicinal plant processing industry has an impact on increasing demand for raw materials. The rate of demand for medicinal plant raw materials is increasing along with the trend of public interest in consuming herbal medicine, the high price of modern chemical drugs and the lifestyle that leads to back to nature. The increase in the rate of consumption of natural ingredients medicines can be seen from the production of Natural Material Extract Industry (IEBA) and Standardized Herbal Medicine (OHT). The development of IEBA and OHT can lead to competition between companies to maintain market share. Every company in the industry must be able to develop its products according to market needs.

The development of these products requires producers to be more responsive in understanding their consumer behavior patterns, so that information on product attributes that consumers prefer. Manufacturers seek to identify the character of consumers in the product purchase process. Consumers have alternative choices in making decisions about the type of herbal medicine to buy. The number of herbal brands on the market makes consumers have many alternative choices according to their desired preferences.

# 1.2. Research Purposes

- a. To analyze the attributes that determine the choice of purchasing decisions.
- b. Analyze the closeness of the relationship between the combination of attributes and consumer preferences.

# 2. LITERATURE REVIEW

## 2.1. Product Atribute

attributes Attributes are properties or characteristics of a product. In general, attributes function in determining evaluative criteria in the consumer decision-making process. Marketers are very interested in consumer knowledge about product attributes because they can influence consumers in making purchasing decisions. Attributes are divided into three aspects, namely product quality, design and product characteristics (Kotler, P., 2005) ,. Product quality is the capability of the product in relation to its function. Product characteristics are used to distinguish differences from competing products, while product design shows the characteristics of the product appearance that trigger consumer attention. The results of the research on product attributes of oyster mushrooms, namely packaging, quality, price, and brand have a significant effect on purchasing decisions except for brand attributes (Sudrajat, AB and DR Andriani, 2015). Known product attributes can be used as a medium in determining purchasing decisions

#### 2.2. Consumer Preferences

Consumer preferences state that consumer attitudes towards a choice of product brands that are formed have gone through the evaluation stages of alternative types of brands (Kotler & Keller, 2009). The drug preference study concluded that modern drug preference was 65.4% and herbal medicine 34.6%. The factors that most influence the choice of modern medicine are economic and psychological factors, while the choice of herbal medicine is due to social, psychological and economic factors (Yudhianto, 2017).

# 3. METHODS

The research was conducted at CV Toga Nusantara, Bekasi City and at the Sringganis Garden Processing Industry in Bogor City. Determination of the location is done purposively with the consideration that the two companies are the herbal medicine industry which directly sells its products to the final consumers. The data was collected from February to September 2020.

The respondents were determined by *purposive sampling*, based on the following criteria: the final consumer who bought the herbal medicine. The number of respondents interviewed was 60 people from the two companies. Respondents were taken using the Accidental Sampling method. Respondents are consumers of herbal medicine who happen to meet a researcher who is actively making purchases at the sales outlet location.

The data analysis used was quantitative and descriptive analysis. In quantitative analysis carried out using conjoint analysis, conjoint analysis is processed using software SPSS

17 for windows. The most detailed conjoint method in evaluating the level of consumer preference is related to levels and attributes so that respondents can be more specific in determining attributes and levels of choice.

## 4. RESULTS AND DISCUSSION

# 4.1. Results

The attributes analyzed were packaging, price, expiration date, and properties. The analysis showed that the most important attribute in the purchase of herbs as shown in Table 1.

No.	Attribute	ValueInterests
1	Efficacy	70 769
2	Prices	16 668
3	Expired date	6,816
4	Packaging	5,748
	Total	100

Table 1 conjoint analysis against Relative Interest Jamu Attribute Value

Table 1 shows the most important attribute is efficacy with an importance value of 70,769 this shows that the consumers of herbal medicine are very concerned about the efficacy of herbal medicine. The second attribute is price with an importance value of 16,668, the next attribute is the expiration date with a value of 6,816, and the last one is packaging with a value of 5,728, this packaging attribute is also not considered by consumers when buying herbal medicine compared to other attributes.

# 4.1.1. Herbal Medicinal Efficacy

Efficacy is the most important attribute in a herbal product. The level of attributes regarding the efficacy of herbal medicine or the value of use can be seen in Figure 1.

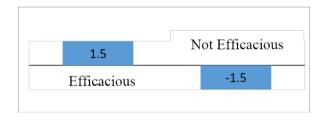


Figure 1 Value of Usefulness Level of Attribute Efficacy of Jamu

Figure 1 shows that consumers really like herbal medicine which has efficacy with a value of 1.5. nutritious herbs can be used as consumer preferences and favored by consumers while non-efficacious herbal medicine has a negative value, namely -1.5 This shows that consumers really do not like herbs that have no efficacy and consumers really pay attention to the efficacy in buying herbal medicine

## 4.1.2. *Price*

Attribute price has two levels that is, the price is affordable and expensive. At the attribute level, the high price has a utility value of -0.354, this indicates that the consumers do not like expensive herbal products and the consumers prefer affordable herbal medicine with a benefit value of -0.354, the value of the usefulness of this attribute in Figure 2

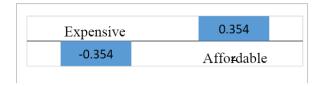


Figure 2 Value of UsefulnessPrices

# 4.1.3. *Expiry time*

Preferred expiration time has a long-lasting expiration time of 0.087 while the non-durable one is -0.087. This shows that consumers prefer herbal medicines that have an expiration date compared to those that do not last long (Figure 3).

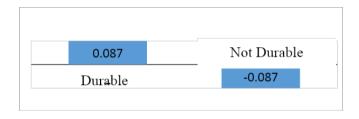


Figure 3 Value of Use on Expiration Time

# 4.1.4. Packaging

The level of packaging has 2 levels of attributes, namely unattractive and attractive packaging, consumers prefer attractive packaging with a value of 0.042 than unattractive packaging of -0.042. This shows that the packaging made by consumers prioritizes consumer preferences for herbal medicine, can be seen in Figure 4.

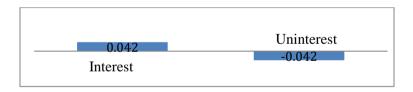


Figure 4 Value of Packaging Use of

#### 4.1.5. Correlation Test

The accuracy of the conjoint analysis of the combination of attributes with consumer preference results is measured by the correlation test. Correlation test results are shown in Table 2.

Table 2 Test Results Correlation Attributes combination with Preferences Consumer

	value.	Sig
Pearson's R	0.991	0.000
Kendall's	0.982	0.000

Table 2 shows the Pearson's R correlation value of 0.991, with a significant value of 0.000.

## 4.2. Discussion

In this study, consumer preferences were analyzed using conjoint analysis using SPSS. Puspasari, (2017) in his research entitled consumer preferences and marketing strategies for organic spinach puree products case study: cv. Bogor eternal addin uses descriptive analysis, and conjoint analysis to determine preferences, as well as hierarchical analysis of the process to formulate the right marketing strategy.

The accuracy of the conjoint analysis of the combination of attributes with the results of consumer preferences is measured by the correlation test. The results of the correlation test show that the Pearson's R correlation value is 0.991, with a significant value of 0.000, which states that there is a close relationship between the combination of attributes and consumer preferences because the significant value of Pearson's R is smaller than the significant level of the attributes used, namely 0.05. The test results show that the value of importance with conjoint analysis can be used as consumer preferences for herbal medicine which can be used as a reference in developing the marketing mix for herbal products. This is in line with research by Ferrinadewi, (2005) which concluded that 3 attribute factors are considered by consumers in making cosmetic purchasing decisions, namely quality factors, risk factors and brand factors.

The attributes used in this analysis are efficacy, price, expiration time, and packaging. The results showed that the most important product attributes were efficacy with an interest value of 70,769, price with an interest value of 16,668, expiration date with a value of 6,816, and finally, packaging with an interest value of 5,728. The high importance value is obtained by the efficacy attribute. This shows the preference for the herbal medicine processing industry regarding the properties that must be maintained in order to maintain consumer confidence. The attribute that has the lowest value is packaging. This shows that these attributes are not very important for consumers in deciding to buy herbal products. However on The results of research by Wahyuningsih et al. (2016) entitled analysis of the level of consumer satisfaction with the product and price of dangke crackers with the Nursi brand in Enrekang Regency (a case study in the village of Talaga), showed that the level of consumer satisfaction with the product and price stated that they were very satisfied with the packaging attributes, variations. taste, and the price of the Dangke

## 5. CONCLUSION

The results of the study concluded that the most important attributes in purchasing herbal medicine, the most important of which are the properties, price, expiration time and packaging. There is a close relationship between the combination of attributes studied and consumer preferences for herbal medicine.

# RECOGNITION

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## REFERENCES

- Ferrinadewi, 2005. Product attributes to consider in purchasing cosmetics and their impact on consumer satisfaction in surabaya. *Journal of Management and Entrepreneurship* 7 (2): 139-151
- Kotler, P. 2005. Marketing management. Millennium edition. Jakarta: Prenhallindo.
- Kotler, P., and Kevin L.K., 2009. *Marketing management*. Thirteenth Edition. Jakarta: Erlangga.
- Lagiono, L.E., 2018. Utilization of plants as medicine by karangdukuh village community, belawang district, barito kuala regency [Internet]. ISSN Life Journal: 2443-3608 Vol 4 No. 3: 114 119
- Puspasari. 2017. Consumer preferences and marketing strategies of organic spinach puree products. Case study in cv. Addin abadi bogor. *Journal of Agrotechnology* vol. 27 no 2
- Wahyuningsih *et al.* 2016. Analysis of consumer satisfaction level of product and price of dangke crackers with nursi brand in enrekang district. Case study in talaga village. *Journal of agricultural science and industry* vol 3 no 1
- Yudhianto, E., 2017. Comparison of Community Preferences for Herbal Medicine and Modern Medicine at Sei Agul Health Center, Karang Berombak Village, Medan in 2017. North Sumatra (ID): University of North Sumatra.