

Map of the Best Selling Health Products During the Covid-19 Pandemic Period on the Popular Marketplace in Indonesia

Wati Susilawati¹, Dini Turipanam Alamanda²,

Siti Galfanny Rahmanillahi Sabitri Fajri³, Risma Muhamad Ramdani⁴

¹²³⁴Universitas Garut, w.susilawati@uniga.ac.id

ABSTRAK

The Covid-19 pandemic can change consumer habits and behavior, consumer preferences regarding the health products they buy in the marketplace are also increasingly shifting. Health products that became the best-selling products during the pandemic included masks, hand sanitizers, face shields and vitamin C. This study aims to determine the criteria for each health product based on health product attributes on popular marketplaces in Indonesia. The research method used is descriptive quantitative with a survey conducted on 100 respondents. The data is then analyzed using a multidimensional scaling approach to produce a map of the best-selling health products on popular marketplaces in Indonesia. The results show that the product that has the highest ranking in various health product attributes is a mask product, followed by vitamin C, face shield and hand sanitizer. This is seen from the various attributes involved such as efficiency, effectiveness, health benefits, side effects, ingredients, cautions, target accuracy, product reactions and product durability. This study shows that the attribute values of a product can change along with changes in the environment and consumer needs.

Keywords: Covid-19, Multidimensional Scaling, Mapping, Health Products.

PENDAHULUAN

The Covid-19 pandemic situation has made many people around the world become more health conscious (Barak & Mudgil, 2023). In order to maintain body immunity, sales of health products have increased since the beginning of the pandemic ((Crawford et al., 2022). The Covid-19 era has created a new trend to market products online through various marketplace platforms (Akhmadi & Pratolo, 2021). This occurs because circulation restrictions and stricter behavior have been implemented for consumers due to fears of contracting a virus, so that shopping activities in marketplaces are considered a safer choice (Gomes & Lopes, 2022). Similar to what happened in Indonesia, the increase in shopping at marketplaces during the pandemic has created competition so that several marketplaces emerged that have become top leaders such as Tokopedia, Bukalapak and Shopee (Candra et al., 2022; Sari et al., 2022). In the third quarter of 2021 it is known that there have been high visits to the three marketplaces (Katadata, 2022). Of the 10 popular marketplaces, Tokopedia, Shopee and Bukalapak are in the top three in the number of visits during the third quarter of 2022. It is known that there were 147.8 million visits to the Tokopedia website, followed by Shopee with 127 million visits and Bukalapak in third place. with 29.2 million visits (Katadata, 2022). The high interest of consumers in health products is one of the factors that causes the level of visits to the marketplace to increase (Crawford et al., 2022).

There are various recommendations for using health products during a pandemic. According to the World Health Organization (WHO), wearing face masks can significantly reduce the spread of the Covid-19 virus (Agarwal et al., 2023), this makes mask manufacturers

produce masks on a large scale (Arora et al., 2022). The use of a face shield can also protect the facial area and mucous membranes such as the eyes, nose and mouth from the spread of droplet infection (Khan & Parab, 2021), besides that the recommendation to use hand sanitizers has led to a high increase in demand in Indonesia (Machmud & Minghat, 2020). It is different, in an analysis using Google trends, it is observed that vitamin C products are one of the products that are sought after by the public to boost immunity (Amelia & Syakurah, 2020). Based on this, it can be seen that there was an increase in demand for products such as masks, face shields, hand sanitizers and vitamin C products during the Covid-19 Pandemic.

Based on this background, the purpose of this research is to find out the map and positioning of health products purchased in popular marketplaces in Indonesia. Mapping will be carried out using the MDS (Multidimensional Scaling) approach. The results of MDS are spatial maps that provide spatial information about the relationship between different objects, where objects that are similar are located close together, while objects that are different are far apart (Leeuw, 2005). The results of this research are expected to contribute ideas regarding the health product business map during the Covid-19 pandemic period on popular marketplaces in Indonesia so that it can be used as material for consideration for business actors to develop their business, in addition to providing information to consumers regarding health product maps.

KAJIAN PUSTAKA

Atribut Produk Kesehatan

In an effort to develop a product, attention is needed to the benefits that will be offered to consumers, this can be done by communicating and providing it through product attributes (Philip Kotler & Keller, 2016). Products consist of several attributes, each product attribute has an inherent value and will be evaluated by consumers (Wang et al., 2022). Product evaluation by consumers can be used as an understanding of the actual criteria desired by consumers (Alpert, 1971). In the decision-making process, consumers tend to prioritize one attribute over other attributes, also trying to be able to maximize the function and usability of a product through a systematic and comprehensive analysis of each attribute (Lago et al., 2020). In the health sector, there are various product attributes that can be evaluated, three of which are Efficacy, Safety and Performance (Tal, 2011).

The Efficacy attribute is reflected by several indicators that can be measured, one of which is the user's perception of product efficiency when used in achieving health goals (Ionescu et al., 2022). Apart from that, it is also seen from the effectiveness of health products in overcoming a disease which is also important in the pharmaceutical industry (Ralbovsky & Smith, 2023). In order for a product to be effective, the product must be able to perform according to its intended use (Tal, 2011). In addition, health benefits are one indicator that can be measured (Thomas et al., 2022).

In the safety attribute, a safe product is not allowed to do what it shouldn't do, this can be measured from the side effects on product users (Tal, 2011). In addition, products can be seen from ingredients that are safe to use (Ralbovsky & Smith, 2023; Sachar et al., 2022). In terms of safety, awareness of user health is something that needs to be reviewed, this can be seen from how someone is aware of the importance of safety warning signs when using these products (Fukuda & Saito, 2021).

The third attribute used is performance. In terms of quality, Philip Kotler and Amstrong (2016) stated that a product in performing its function can be measured by the accuracy of the product. In addition, good product reactions to users also need to be reviewed (Li et al., 2022). In terms of performance attributes, another indicator that can also be measured is product durability when used (Rausch et al., 2021).

Preferensi Konsumen

Consumer preference for healthy and quality products is the main thing (Abdul Wahab et al., 2023). Consumer understanding of health products can encourage consumers to use these products (Ong et al., 2022). This preference is driven by subjective perceptions, judgments are basically determined by consumers and depend on their needs and goals (Bernués et al., 2003). Information that consumers receive through the media greatly influences consumer perceptions and behavior (de Araújo et al., 2022).

Positioning

In general, positioning has become one of the key components in modern marketing management (Saqib, 2021). Positioning is carried out by marketers to be able to find out consumer perceptions of products that are relatively competitive, this is of course also based on how consumers perceive the quality, attributes, value, price and image of their products, in the end this positioning depends on consumers' view of the product (Panwar & Patra, 2017). Mapping perceptions in product positioning strategies can provide recommendations for business and is a powerful tool in marketing (Gigauri, 2019).

METODE PENELITIAN

Based on its type, this research uses a quantitative descriptive method. The approach used is to use MDS as a data analysis method to produce visual images of health products that are in demand in popular marketplaces in Indonesia. MDS can directly describe the dimensions of product assessment visually regarding the similarity of best-selling health products. In determining preference attributes, a literature review was carried out regarding what things can be measured from various health products, so that 3 preference attributes regarding health products were obtained (Tal, 2011), the first attribute is efficacy which consists of efficiency, effectiveness and benefits health, the second attribute is safety which consists of side effects, ingredients and caution and the third is the performance attribute which consists of product accuracy on target, product reactions and product durability. The attributes used were then used as the basis for compiling a questionnaire which was distributed to 100 respondents using a non-probability sampling technique to be precise using a purposive sampling type. The population in this study were consumers who had bought or used health products such as masks, hand sanitizers, face shields and vitamin C during the Covid-19 pandemic in 3 popular marketplaces in Indonesia: Shopee, Tokopedia and Bukalapak. The questionnaire was prepared based on conditional ranking order, where the questionnaire provided a choice of answers regarding the comparison of the four health products in turn, then the respondent was required to provide a rating by sorting all possibilities from very similar to very dissimilar to the attributes in the questionnaire.

Data that has been collected from respondents is then analyzed using preference mapping with internal preference mapping types based on Multidimensional Data Preference Analysis and Principal Component Analysis which is carried out on preference data with products in rows (observations) and consumers in columns (variables). The data is in the form of ratings filled out by consumers for each product. Preference mapping consists of two dimensions: observations and variables. In MDS, the closeness value between one object and another object from the input data will then be converted into a multidimensional Euclidean field, the distance between objects presented is the result of a calculation based on the size of

the Euclidean distance. The following table is a profile of respondents based on gender, age and occupation:

Table 1. Respondent Profile

	Respondent	N
Gender	Men	32
	Women	68
Age	≤ 19	17
	20-24	34
	25-29	31
	≥ 30	18
Occupation	Student	38
	Government employees	9
	BUMN employees	5
	Private employees	28
	Others	20

Based on data regarding the profile of respondents, women dominate as many as 68 people. Then students are also known to be the dominant occupation, where most respondents come from generation Z with an age range of 20 to 29 years, the sample used is considered to be representative of the consumer population who have purchased four health products in the marketplace. This is because currently consumers who shop online in Indonesia are dominated by women rather than men (Karnadi, 2022). In addition, Gen Z has a dominant role in the development of online transactions during the Covid-19 pandemic (Aseng & Pandeiro, 2022).

HASIL DAN PEMBAHASAN

To analyze the attribute position mapping for a unique product, the Euclidean distance from the position of each health product is used. The Euclidean distance score describes the ranking of a product on the attribute, if the value is lower then it will get a higher rating, vice versa if the value is higher then it will get a lower rating. The Euclidean distance for health product attributes is presented in table 2. Based on the output of data processing using the IBM SPSS Statistics 26 software in table 2, it can be seen that mask products dominate in obtaining the lowest Euclidean score on each health product attribute, for example on the efficiency attribute (1 .3777), effectiveness attribute (0.4656), ingredient attribute (0.6032), caution attribute (1.4216), right on target attribute (0.9017) and product reaction attribute (0.4395), meaning that the mask product has the highest rating on each attribute than the other three products. The following in table 2 presents the Euclidean distance of health products to product attributes:

Tabel 2. Euclidean Distance of Health Products to Attributes

Attribute	Health Products			
	Mask	Face Shield	Hand Sanitizer	Vitamin C
Efficiency	1,3777	2,8304	1,9579	2,8274
Effectiveness	0,4656	2,6813	2,8689	1,8437
Health Benefits	0,9811	3,1968	4,2831	0,843
Side Effects	2,7496	2,9285	4,7266	0,9674

Ingredient	0,6032	2,3665	3,7598	2,7510
Caution	1,4216	1,4461	3,8240	1,4403
Right on Target	0,9017	1,7470	3,1450	1,7023
Product Reaction	0,4395	2,5710	3,715	1,0361
Product Durability	1,8621	0,7805	3,4210	2,2141

Sumber: SPSS 2022 processing results

Based on the coordinate values contained in table 2 regarding the mapping of respondents' perceptions of health products, it is visualized in Figure 1.

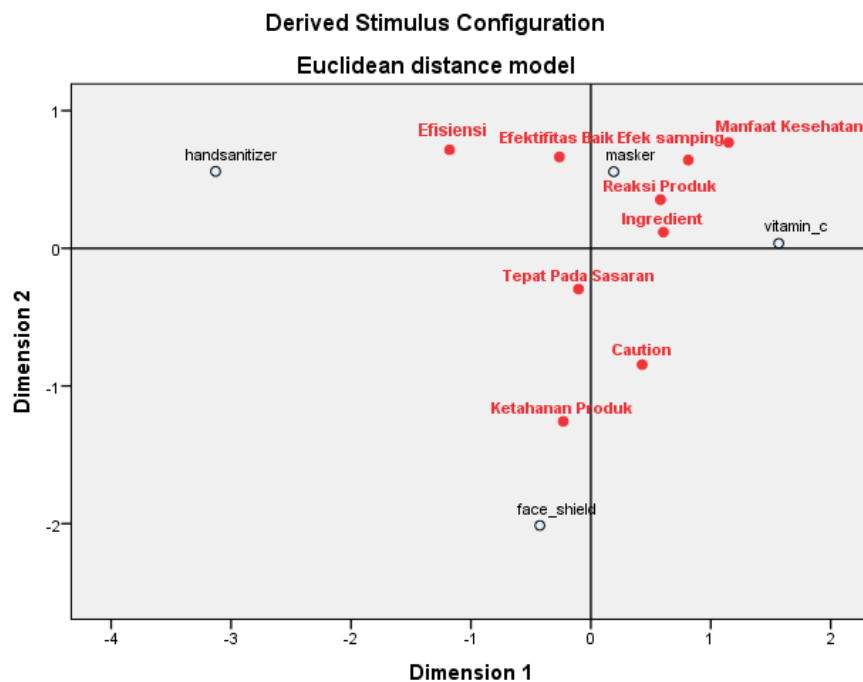


Figure 1. Perceptual Map of Health Products

This research's perception mapping is presented in a two-dimensional image that displays similarities and dissimilarities between one product and another based on distance. The image provides clues regarding the relationship between the similarity of each group of health products and the attributes of health products based on user perceptions. This analysis is carried out using the Euclidean distance position formula with the related product. Based on the principle that the closer the Euclidean distance to related health products, the better the health product based on these attributes. For example, based on Figure 2, the face shield product has a position adjacent to the product's durability attribute, while the mask, hand sanitizer and vitamin C products are not adjacent to the product's durability attribute, this shows the dominant advantage of the face shield product in product durability. For clarity, the position of the four health products based on all attributes can be seen in table 3.

Table 3. Product positioning based on overall attributes

Attributes	Health Products			
	Mask	Face shield	Hand sanitizer	Vitamin C
Efficiency	1	4	3	2
Effectivity	1	3	4	2
Health Benefits	2	3	4	1
Side Effects	2	3	4	1
Ingredient	1	2	4	3
Caution	1	3	4	2
Right on Target	1	3	4	2
Product Reaction	1	3	4	2
Product Durability	2	1	4	3

From table 3 which presents the product position based on overall attributes it is known that mask products dominate in first place in the attributes studied, of the 9 attributes involved 6 of them are occupied by mask products in first place, namely on the attributes of efficiency, effectiveness, ingredients, caution, right on target and product reaction. The Covid-19 outbreak has created renewed attention to the research and manufacture of large-scale face masks, during a pandemic the use of face masks for respiratory protection has become increasingly important for controlling disease and death from exposure to particulate pollutants and toxic pathogens (Arora et al., 2022). Mohammadi et al., (2022) in his research stated that to be able to reduce the impact of the spread of the Covid-19 virus apart from practicing social distancing, the use of masks is also considered to have good performance, this is in line with the results of research on performance attributes in terms of effectiveness and the efficiency of using mask products which ranks first. In general, all types of masks can reduce exposure to viruses, but this effectiveness also depends on ingredient attributes, where differences in materials can affect effectiveness in filtration (Arora et al., 2022), so that it is easier for users to be able to distinguish what mask specifications should be used. Furthermore, Arora et al., (2022) also explained that there are various types of masks and differences in their functions and uses, in a popular marketplace for best-selling products, various masks that are sold have product descriptions and product specifications for masks, this places masks in first place in terms of attributes. caution, apart from that the use of masks that are good and correct is often socialized by the government (Kemenkes, 2021; WHO, 2020). Then based on the right attribute on the target, masks also rank first, this is in line with the recommendations of the world health organization (WHO), which states that using face masks can significantly reduce the spread of the Covid-19 virus (Agarwal et al., 2023).

Face shield products only rank first in product durability attributes, Ramirez Varela et al., (2022) in his research found that the use of a face shield while using a mask does not have a significant difference in results when compared to using only a mask, so the face shield shield in this case is used as a complementary product to prevent exposure to areas of the face that are not covered by a mask. Therefore masks remain the main choice for use by consumers. Face shields are a product that is also in demand as a complement to masks to maximize prevention. The face shield also has durability when used, so it can be used many times. However, a good face-shield product can be seen from various elements other than durability, namely the ability to adjust the binding tension, transfer the load bearing from the temple, anti-fogging, ventilation and freedom of movement (Kurtz et al., 2022).

On health benefits, vitamin C ranks first. Firouzi et al., (2022) stated that vitamin C has health benefits to be able to increase immunity during a pandemic. However, excessive doses of vitamin C can cause excess oxalate which has a negative impact on health, so it needs to be

used as needed to get good side effects for the body. With the right dosage of vitamin C can provide good side effects, so that it ranks first in the attribute side effects.

Hand sanitizer are in the final ranking on all attributes except for the efficiency attribute which is in third place under masks and vitamin C. Even though in Indonesia the demand for hand sanitizers has also increased and there have been price changes, this is still considered stable and at a reasonable level. the number of companies selling this product does not affect price stability. In contrast to the scarcity that occurred in masks, this was due to high demand and scarcity, which resulted in soaring prices. The same thing happens with vitamin C products, the selling price can increase many times. This shows the level of demand and priority in use (CNBC, 2020). If seen from the Decree of the Minister of Health of the Republic of Indonesia concerning Health Protocols in preventing the Covid-19 virus, it recommends various places and public facilities to be able to provide hand sanitizers at entrances, elevator doors, dining areas and various other strategic locations. Meanwhile, masks and vitamin C or face shields are not recommended to be provided.

SIMPULAN DAN SARAN

Simpulan

Based on the results of the research that has been done, several conclusions can be drawn from this research. There are differences in each attribute on the health product map. In general, the health product that has the most excellence on various attributes is a mask product. Meanwhile, based on the positioning map, mask products are superior to other health products in terms of efficiency, effectiveness, ingredients, caution, right on target and product reactions. Vitamin C products excel in the attributes of health benefits and side effects, then face shield products excel in product durability attributes, while hand sanitizer products are considered to have the lowest rating for almost all attributes.

Saran

Based on the conclusions of the research results that have been described, then the results of the implications for producers are compiled so that they can pay attention to and increase consumer needs based on attributes such as efficiency, effectiveness, health benefits, side effects, ingredients, caution, right on target, product reactions and product durability . In addition, sellers of health products in the marketplace are advised to be able to pay attention to and increase consumer needs based on some of the health products most chosen by consumers in the consumer perception map, such as masks and vitamin C which get the highest ranking on the consumer perception map on health product attributes. So that sellers can correctly choose health products that must be prioritized during the Covid-19 pandemic.

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