

Healthy Food Consumer Segmentation for Targeting and Positioning New Product Slimming Jelly

Segmentasi Konsumen Healthy Food untuk Targeting dan Positioning Produk Baru Slimming Jelly

Ita Yustina^{1*}, Didik Purwadi², Nafis Khuriyati²

¹Assesment Institute for Agricultural Technology (AIAT) of East Java,
Jl. Karangploso Km 4, Malang 65101, Indonesia

²Department of Agro-Industrial Technology, Faculty of Agricultural Technology, Universitas Gadjah Mada
Jl. Flora No 1, Yogyakarta 55281, Indonesia

* itayustina212@gmail.com

Received: 3rd October, 2020; 1st Revision: 14th June, 2021; 2nd Revision: 15th July, 2021; Accepted: 23rd August, 2021

Abstract

This study aims to determine market segments, market targets, and market positioning of slimming jelly using the segmentation analysis on healthy food consumer. The respondents used in this study were the consumers who regularly consume healthy food at least once per week within the last two months. The number of samples is 204 respondents. The consumer segmentation is done based on several variables including demographic aspects, motivation, consumption consistency, social tendencies, and attitudes towards new products. The segmentation analysis is carried out using the K-means non-hierarchical clustering method. The method splits the customers into three significantly different clusters at the 0.05 level, namely the adolescent age segment, which has attention to body shape, the adult segment which focus on body weight control, and the adults' segment which are not interested on body weight control. Based on the principle of selective specialization, the target market for slimming jelly is in clusters 1 and 2, with slimming jelly is positioned as a hunger delaying food that claimed to be high in fiber and low in calories so that it is suitable for health and can be used in diet programs.

Keywords: healthy food, positioning, segmentation, slimming food, targeting

Abstrak

Tujuan penelitian ini adalah penentuan segmen pasar, target pasar, dan positioning produk slimming jelly melalui segmentasi konsumen healthy food. Sampel yang digunakan adalah pengonsumsi healthy food secara rutin minimal 1 kali per minggu dan terakhir konsumsi dua bulan yang lalu. Jumlah sampel sebanyak 204 responden. Segmentasi berdasarkan pada variabel dari aspek demografis, motivasi, konsistensi konsumsi, kecenderungan sosial dan sikap terhadap produk baru. Analisis segmentasi menggunakan metode K-means non hierarchical clustering membagi pasar menjadi tiga klaster yang berbeda secara signifikan pada taraf 0,05, yaitu segmen usia remaja yang memiliki perhatian terhadap bentuk badan, segmen dewasa yang memiliki tujuan manajemen berat badan, dan segmen dewasa yang kurang memiliki motivasi manajemen berat badan. Berdasarkan prinsip selective specialization (pemilihan berdasarkan tujuan tertentu), penetapan target pasar slimming jelly adalah pada klaster 1 dan 2 dengan positioning slimming jelly sebagai makanan selingan penunda lapar yang memiliki klaim tinggi serat dan rendah kalori sehingga baik untuk kesehatan dan dapat digunakan untuk membantu program diet.

Kata kunci: healthy food, positioning, segmentasi, slimming food, targeting

INTRODUCTION

The population with obesity and degenerative diseases in Indonesia in recent years has increased. Data of the Basic Health Research published by Indonesian Agency for Health Research and Development shows an increase in the prevalence of obesity by 7% and preobese by 2.1% (Badan Penelitian dan Pengembangan Kesehatan, 2018).

The poor consumption patterns tendency is one of the factors that can increase the disease risk. According to the Indonesian Directorate General of Nutrition and Maternal and Child Health, this risk is supported by the development of various junk food or fast food products, ready-to-eat foods, and soft drinks that tend to contain high calories, fat, and protein but are low in fiber, vitamins, and minerals (Direktorat Jenderal Bina

Gizi dan Kesehatan Ibu dan Anak, 2018; Septiani & Raharjo, 2017; Kraak et al., 2017). Besides medication and regular work-out activities, diet program is a health care solution for people with obesity and several degenerative diseases such as high cholesterol, diabetes, kidney disease.

Diet is a consumption pattern by adjusting the amount and type of food according to the nutritional needs (Puspawati & Briawan, 2014; Fairuz & Nisa, 2015). Diet is believed to control body weight and maintain a healthy body (Ng et al., 2014). The increasing prevalence of obesity and other degenerative diseases has increased the need and demand for healthy food products. Healthy food contains low calories, low fat, and high fiber (Kraak et al., 2017). The company responds to the need and demand for healthy food by producing health-oriented processed food products following the current diet program using nutritional content and health function claims. Nutritional content claims can be low in calories, low in fat, high in protein, high in calcium, and high in fiber, while function claims for health can be in the form of reducing the risk of heart disease, burning fat, lowering cholesterol, and others. Healthy food products nowadays have expanded in various types of products, flavor variants, and brands (Syah, 2014). These products include soft drinks, instant powder, shakes, snack bars, cereals, cookies, and crackers (Pangestu, 2016; Rheinradia et al., 2016; Supit et al., 2016; Nurlaila, 2017). These various choices play an essential role for consumers in changing towards a healthy diet (Verain et al., 2016).

The healthy food product market consists of consumers with various characteristics, goals, motivations, and consumption behaviors. The reason for market segmenting is because of the consumers' heterogeneity, differences in product needs, and differences in responses to the products offered. (Verain et al., 2016). Segmentation is intended to find market opportunities and determine the served target segments. Market segmentation is based on geographic, demographic, psychographic, and behavioral factors (Kotler & Keller, 2012). Marketing efforts are expected to be more effective through segmentation.

Targeting is market segments selection as a marketing target. Market segment determination is based on the formed market segment evaluation results. Each market segment has its charm. The selection of one or more specific segments is then carried out during targeting (Daryanto, 2011). According to Ferrel & Hartline (2014), the basis for

selecting target markets are single segment targeting, selective targeting, mass-market targeting, and product specialization. The targeted market segment should have a sufficient number of people, have a stable demographic and psychographic background, and be easily accessible. The accuracy in determining the target market showed by the product suitability with consumer needs. Positioning is carried out after the target market is determined.

Positioning is an essential strategy so that the product has its impression or is different from other products. Positioning is the act of designing a product and forming a specific impression in the minds of consumers so that the product is different from competing products during a variety of similar products. Product positioning creates preferences that become reasons for consumers to buy the product. Positioning can be done based on the uniqueness of the product, benefits, image, and product (Tania & Dharmayanti, 2014). Positioning can also be done based on product quality, usage, and price (Pangestu, 2016).

Segmenting, targeting, and positioning help to recognize consumer characteristics, identify consumer interests and needs, and determine the target market segment to focus more on providing services and form a specific impression on consumers. Service to a broad market with heterogeneous consumers will be complex and less optimal. Companies can be more optimal in formulating marketing strategies through segmenting, targeting, and positioning strategies. This marketing strategy also needs to be considered for slimming jelly as a product that is claimed to be a healthy food product.

Slimming jelly is a jelly in a suitable packaging ready for consumption with a volume of 125 ml for one consumption. Slimming jelly is made in two flavors; a variant without milk and a variant with milk commonly called pudding. Slimming jelly is made from components rich in fiber, low-calorie sweeteners. The fiber-rich ingredients in slimming jelly include carrageenan, inulin, Nata, and "porang" (*Amorphophallus muelleri*) tuber glucomannan, while the low-calorie sweeteners used to make slimming jelly are refined sugar and stevia. Slimming jelly is produced as a snack product that helps meet fiber needs with limited caloric content, so it is suitable for a weight loss diet program. These products are also suitable for diet programs for certain diseases, such as diabetes, heart disease, and high cholesterol.

Several tests have been carried out on Slimming jelly products, including characterization

tests for physicochemical properties, standardization of nutritional values, sensory tests, hunger resistance tests, clinical trials, and scaling up. This series of tests aims to obtain products that meet quality standards, meet the requirements of high-fiber and low-calorie claims, have the function of managing weight, and are safe for consumption. The quality standard of slimming jelly according to the Indonesian National Standard (SNI) 01-3552-1994 is that it is semi-solid, has a typical odor, taste, and color, and has a chewy texture (Badan Standardisasi Nasional, 1994). Head of the Indonesian Food and Drug Supervisory Agency No. 13 of 2016 about Supervision of Claims on Processed Food Labels and Advertisements, a product can be claimed to be high in fiber and low in calories if it contains 6 g fiber/100 g and contains 40 kcal/100 g (Badan Pengawas Obat dan Makanan, 2016). The scale-up results also show that slimming jelly production is a technically and economically feasible business to run.

Slimming jelly, according to the product life cycle theory, has undergone a research and development phase. The product is heading to the introduction phase in the market, which is the phase where a product has just been introduced to consumers. Slimming jelly as a new product is not yet known by consumers. The obstacle in this phase is that consumers already have a habitual pattern that has been followed with products that are already on the market (market resistance). Therefore, segmenting, targeting, and positioning slimming jelly in the healthy food market needs to be done. The existence of slimming jelly at the time of launching a new product in the market with the right strategy of segmenting, targeting, and positioning is expected to be realized by consumers so that consumers are interested in trying the product, and then the product can penetrate quickly in the market.

METHODS

This research is a qualitative descriptive study. The research implementation through a detailed and complete description of the actual situation is then analyzed and concluded. Primary data was obtained using a questionnaire with closed questions. Questionnaires were given to slimming jelly consumers online and offline. Secondary data were obtained from literature studies and interviews with the slimming jelly research team and questionnaire respondents. The data obtained were then analyzed qualitatively based on the related theory.

Determination of Population and Sample

The population in this study is all healthy food consumers in Indonesia. This study uses the purposive sampling method in determining the sample. The criteria for the sample used as respondents are the frequency of consuming healthy food on average one time per week to a routine every day, and the most recent routine consumption was two months ago. The determination of the sample criteria was obtained from the respondents' interviews results. The things that are considered in determining the sample criteria are the types of healthy food in the market which are very diverse, which can be in the form of snacks, soft drinks, milk-based drinks, and primary food menus. Each consumer has a different consumption frequency and has particular reasons for stopping consuming regularly. The sample response is expected to represent the population of regular healthy food consumers with the specified sample selection criteria. The questionnaire collection results showed that the number of samples obtained was 204 respondents.

Determination of Research Variables

The questionnaire in this study was used to obtain background information on consumer characteristics, consumption behavior, and consumer psychology. The determination of research variables is based on studies from various literature. The variables analyzed in the study are shown in Table 1.

Questionnaire Preparation and Testing

The questionnaire was prepared using 4 rating scales: strongly disagree (score 1) to strongly agree (score 4). Several tests were carried out on the questionnaire and data so that the data obtained were valid, reliable, and qualified for further analysis. Processing and testing of data using Microsoft Excel and SPSS 17. The tests carried out on the questionnaire, and the data are as follows:

1. Test the validity of the content based on the Content Validity Ratio (CVR) value by five experts. This test aims to ask the opinion of experts whether an item is needed on the questionnaire. Items in the questionnaire can be accepted if the CVR value of 5 experts is between 0.6-1.0 (Lawshe, 1975).
2. Test the validity and reliability of the questionnaire on 30 initial respondents. The validity test was conducted to determine whether the ques-

Table 1. The composition of variables and attributes on demographic, psychographic and behavioral aspects

| Aspect | Variable | Attribute | Literature Reference |
|---------------|----------------------------|---|-------------------------|
| Demographic | | Gender | (Verain et al., 2016) |
| | | Age (years) | |
| | | Education | (Kusnanto et al., 2019) |
| | | Income | |
| | | Job | (Nusa & Adi, 2013) |
| | | Marital status | |
| | | Expenses | |
| | Body Mass Index (BMI) | | |
| Psychographic | Motivation | Delay hunger | (Sufa et al., 2017a) |
| | | Maintain body health | |
| | | Maintain a stable weight | |
| | | Lose weight | |
| Behavior | Social tendencies | Friends invitation | (Putri et al., 2020) |
| | | Trend | |
| | | Habits in the family | (Rizka et al., 2018) |
| | | Product selection | |
| | Consistency of consumption | Regular purchase | |
| | | Loyal for quality | |
| | | Loyal even though the price increase | |
| | | Loyal even though there is a suggestion to change the product | |
| | Attitude to new products | Looking for new product information | |
| | | Dabble | |
| | | Change to new quality products | |
| | | | |
| | | | |

tionnaire was appropriate in measuring what it wanted to measure. The validity test in this study was carried out by calculating the correlation between each question and the total score using the product-moment correlation formula. If the value of the correlation coefficient (r table) at a significance level of 0.05 is more significant than the r table and is positive, then the questionnaire can be declared valid (Hendryadi, 2017). The reliability test aims to show the questionnaire's accuracy, consistency, and accuracy in making measurements. The reliability of the questionnaire in this study was measured using Cronbach's alpha test. The reliability of the questionnaire is said to be good if it has a reliability coefficient value above 0.6 (Yusup, 2018). Questionnaires that have been declared valid are then given to all respondents.

- Correlation test, multicollinearity assumption test, and outlier test were carried out on all collected data. The correlation test is intended to determine the reciprocal relationship and the level of relationship between variables, the correlation coefficient (r) is 0, which indicates no correlation, 0-0.25 is a very weak correlation, 0.26-0.50 is sufficient correlation, 0.51-0.75

strong correlation, 0.76-0.99 very strong correlation, 1 = perfect correlation (Sarwono, 2006). The multicollinearity test is one of the classical assumption tests that the linear regression model must meet. If multicollinearity occurs, the model is invalid or cannot be used as an estimator. Multicollinearity occurs if the correlation coefficient is > 0.8 (Gujarati et al., 2015). The outlier test is intended to identify data that deviates too far from other data. Outlier testing is based on the Z score. Z score values outside the range of -3 and 3 are considered outlier data (Ferdinand, 2014).

Clustering

Clustering is used as the basis for segmenting, targeting, and positioning slimming jelly as a healthy food product. The K-means method is used to group the data at the clustering stage. Hierarchical clustering is used to determine the cluster center. K-means is a cluster formation method that is easy, simple, suitable for large amounts of data, and the process requires a relatively fast (Alfina et al., 2012). The cluster's center determination stages are determining the number of clusters, calculating the cluster's distance with the Euclidian distance, selecting the closest distance, and

combining samples so that $n = n-1$. Data grouping is carried out after the cluster center is formed by grouping the data through the stages of calculating the data distance to each cluster center and selecting the closest cluster center until there is no cluster movement. The test of differences between clusters was then carried out using analysis of variance (ANOVA) with a significance value of 0.05. If the test results show that the significance value is <0.05 , then it means that there is a significant difference between clusters. The test results also show the F value. If the F value is high, the difference in the variables in the cluster that is formed is more significant. K means clustering analysis was carried out using SPSS 17 software.

RESULTS AND DISCUSSION

Questionnaire and Data Test Results

The results of the questionnaire test and data are shown in Table 2. The analysis is then continued after these tests have been carried out.

Respondent Profile

Consumers of healthy food products have different demographic characteristics. Different demographic backgrounds and needs will shape different consumption motivations and behavior. Based on Table 3, respondents are dominated by female consumers aged 16-35 years old. Research conducted by Ginis et al., (2012) showed that women between the ages of 20-36 years are interested in body shape and image. Respondents with normal body mass index (BMI) status were 71%, and respondents with preobese and obese BMI status were 20%. Respondents who have a normal BMI may indeed tend to have a normal BMI. These respondents may also have been

preobese or obese, but their BMI status when filling out the questionnaire was normal because they were doing a healthy diet. According to Martins et al. (2018), changes in consumer behavior towards a healthy diet can decrease BMI.

Respondents who took part in this study were graduates from high school, undergraduate, postgraduate, and doctoral graduates, and there were no junior high school graduates. Most of the respondents (59%) are undergraduates. University students and private employees dominate the respondent's profession with 1,500,000 – 3,000,000 IDR income per month. The budget for healthy food shopping for 46% of respondents is 100,000 – 500,000 IDR per month, and the budget for the 22% of respondents is 500,000 – 1,000,000 IDR. The level of education, occupation, and income are the shapers of different ways of thinking or perspectives, and lifestyles impact purchasing decisions.

Segmenting

Respondent Clustering

Clustering analysis on healthy food consumers resulted in 3 clusters. The determination of clusters for each respondent is based on the closest distance of characteristics to the cluster's center (Table 3). The ANOVA test results showed that each cluster's attribute or characteristic variables had a significance value of <0.05 (Table 3). This result shows that the attributes of each variable observed in each cluster are significantly different. This information shows that the three clusters formed have significantly different characteristics to be more manageable targeting and positioning. The two highest F values are found in the social tendency variable, namely the trend attribute and the invitation of friends, with the F values being

Table 2. Test results of questionnaires and data

| Test | Test results | Conclusion of Test Results |
|---------------------------|--|--|
| Content validity | CVR value 0.6-1.0 | Valid |
| Questionnaire validity | r score all statements on the questionnaire > 0.3494 | Valid |
| Questionnaire reliability | Cornbach's alpha score > 0.6 | Reliable |
| Correlation | The correlation coefficient between the statement items in the highest one variable = 0.584 The highest correlation coefficient between variables was 0.261 | The relationship in one variable and the cross-relationship between the variables formed is sufficient |
| Multicollinearity | No correlation coefficient score is > 0.8 | Non-multicollinear |
| Outliers | There are 21 outliers | The data of 21 respondents was not analyzed further |

Table 3. Final cluster center and ANOVA test

| Variables/Attributes | ANOVA Test Results | | Final Cluster Center Results | | |
|---|--------------------|-------|------------------------------|---|---|
| | F | Sig. | 1 | 2 | 3 |
| Motivation | | | | | |
| Delay hunger | 22.925 | 0.000 | 3 | 3 | 2 |
| Maintain body health | 48.048 | 0.000 | 4 | 4 | 3 |
| Maintain a stable weight | 44.742 | 0.000 | 4 | 4 | 3 |
| Lose weight | 44.387 | 0.000 | 3 | 3 | 2 |
| Social tendencies | | | | | |
| Friends invitation | 58.168 | 0.000 | 3 | 2 | 2 |
| Trend | 67.935 | 0.000 | 3 | 1 | 2 |
| Habits in the family | 16.758 | 0.000 | 3 | 2 | 2 |
| Product selection | 37.677 | 0.000 | 3 | 2 | 2 |
| Consistency of consumption | | | | | |
| Regular purchase | 7.982 | 0.000 | 3 | 3 | 3 |
| Loyal for quality | 5.867 | 0.003 | 3 | 3 | 3 |
| Loyal even though the price increase | 6.803 | 0.001 | 3 | 3 | 3 |
| Loyal even though there is a suggestion to change the product | 4.605 | 0.011 | 3 | 3 | 3 |
| Attitude to new products | | | | | |
| Looking for new product information | 14.625 | 0.000 | 3 | 3 | 3 |
| Debble | 5.065 | 0.007 | 3 | 3 | 3 |
| Change to new quality products | 8.509 | 0.000 | 3 | 3 | 3 |

67.935 and 58.168, respectively. This result shows that the most prominent difference between clusters 1, 2, and 3 is in the social tendency variables called trend attributes and friend invitations.

Demographic Aspect

Demographic conditions shape the specific needs of consumer groups. Demographic characteristics are the basis for segmentation which serves to describe the identified consumer segments. This characteristic also shows the ability of consumers to behave in consumption (Sütterlin et al., 2011).

The clustering results (Table 4) show that there are 70 members of cluster 1 (38%), 38 people of cluster 2 (21%), and 75 people (41%). Each cluster has different demographic characteristics. This result is different from the research results by Sarti et al. (2018), which states that only the level of education characterizes buyers of health-oriented products, while other socio-demographic aspects do not characterize this.

Cluster 1 is dominated by respondents under 25 years old; most of the respondents are students. Cluster 1 consumes healthy food more frequently/routinely than cluster 3. Cluster 3 is dominated by young-adult women, working as workers with the highest income compared to other clusters. Cluster 2 is a cluster dominated by

young-adult women who work as workers with low incomes, the highest number of pre-obesity compared to other clusters, and the consistency of consumption of healthy food is higher than in clusters 1 and 3. Income is not always directly proportional to the level of expenditure and the consistency of healthy food consumption. However, the BMI condition that is currently being experienced or has been experienced can be considered or a strong enough motivation to consume healthy food.

Psychographic Aspect

Consumers have specific motivations and goals in consuming healthy food. This purpose relates to the information on the product label that can form a particular perception of the product (Sarti et al., 2018). Some healthy food products offer individual benefits and public benefits. Individual benefits are usually health and economic benefits, while public benefits are usually environmental benefits, social benefits, and local resource benefits.

Motivation to fulfill needs increases hierarchically (Sufa et al., 2017a). This increase also occurs in the motivation to consume healthy food. The most basic motivation is to fulfill basic needs; controlling hunger. Motivation then increases to motivation to meet security needs; maintaining health. The higher motivation is the motivation to fulfill self-actualization, called maintaining

weight stability and losing weight. The analysis of consumption motivation aspects was carried out in this study to determine the proportion of motivation to consume healthy food to maintain health, maintain weight stability, lose weight, and resist hunger.

Healthy food products developed in the market consist of many types of products and brands. Each has a different functional content, how to consume, and benefits. These different

types of products reflect that there are differences in consumer needs for healthy food. The characteristics of consumer motivation in each cluster (Table 5) indicate that all members of clusters 1, 2, and 3 are consuming healthy food to maintain health. The motivation to consume healthy food to maintain body weight is higher in clusters 1 and 2 than in clusters 3. This result is related to the number of respondents experiencing pre-obesity in cluster 2, which is higher than in other clusters.

Table 4. Profile of respondents and each cluster

| Category | Respondent Profile (n = 183) | Cluster Profile | | |
|---|------------------------------|-----------------|------------|------------|
| | | 1 (n = 70) | 2 (n = 38) | 3 (n = 75) |
| Gender | | | | |
| Female | 79% | 84% | 76% | 75% |
| Male | 21% | 16% | 24% | 25% |
| Age (years old) | | | | |
| 16-25 | 34% | 41% | 29% | 29% |
| 26-35 | 44% | 39% | 42% | 51% |
| 36-45 | 15% | 13% | 18% | 15% |
| 46-55 | 3% | 6% | 3% | 1% |
| 56-65 | 4% | 1% | 8% | 4% |
| Marital status | | | | |
| Married | 50% | 46% | 66% | 45% |
| Single | 50% | 54% | 34% | 55% |
| Body Mass Index (BMI) | | | | |
| Under Weight | 8% | 7% | 5% | 9% |
| Normal | 71% | 73% | 68% | 71% |
| Preobese | 13% | 13% | 18% | 11% |
| Obese | 8% | 7% | 8% | 9% |
| Latest Education | | | | |
| High School | 23% | 31% | 21% | 17% |
| Bachelor's Degree | 59% | 50% | 55% | 69% |
| Graduate Degree | 16% | 16% | 21% | 13% |
| Postgraduate Degree | 2% | 3% | 3% | 0% |
| Job | | | | |
| Government/State-Owned Enterprises Employee | 19% | 19% | 11% | 24% |
| Private Sector Employee | 25% | 26% | 21% | 25% |
| Entrepreneur | 9% | 7% | 16% | 7% |
| College Student / Student | 28% | 37% | 21% | 24% |
| Unemployed | 2% | 1% | 8% | 0% |
| Others | 17% | 10% | 24% | 20% |
| Income/month (IDR) | | | | |
| <1.5 million | 28% | 30% | 32% | 24% |
| 1.5 million – 3 million | 25% | 33% | 21% | 19% |
| 3 million – 5 million | 16% | 19% | 16% | 15% |
| 5 million – 10 million | 19% | 11% | 13% | 29% |
| >10 million | 12% | 7% | 18% | 13% |
| Expense/month (IDR) | | | | |
| 100 thousand | 15% | 16% | 11% | 16% |
| 100 thousand – 500 thousand | 46% | 50% | 39% | 47% |
| 500 thousand – 1 million | 22% | 21% | 24% | 23% |
| 1 million – 2 million | 13% | 10% | 21% | 11% |
| 2 million | 4% | 3% | 5% | 4% |

BMI status is one of one's considerations in determining the motivation for healthy food consumption and affects consistency in consuming healthy food. This result follows Fairudz & Nisa (2015) research, which states that pre-obese-obese conditions are improved by consuming healthy foods.

Table 5. Characteristics of healthy food consumer motivation in each segment

| Category | Cluster | | |
|--------------------------|---------------|---------------|---------------|
| | 1 (n = 70) | 2 (n = 38) | 3 (n = 75) |
| Delay hunger | 64% | 50% | 19% |
| Maintain body health | 100% | 100% | 100% |
| Maintain a stable weight | 99% | 100% | 84% |
| Lose weight | 76% | 87% | 28% |

Table 6. Characteristics of the social tendencies of healthy food consumers in each segment

| Category | Cluster | | |
|----------------------|---------------|---------------|---------------|
| | 1 (n = 70) | 2 (n = 38) | 3 (n = 75) |
| Friends invitation | 93% | 21% | 44% |
| Trend | 64% | 0% | 8% |
| Habits in the family | 73% | 39% | 40% |
| Product selection | 73% | 18% | 21% |

A respondent can agree with all attributes so that the total percentage of each cluster can be more than 100%

Table 7. Consistency characteristics of healthy food consumers in each segment

| Category | Cluster | | |
|---|---------------|---------------|---------------|
| | 1 (n = 70) | 2 (n = 38) | 3 (n = 75) |
| Regular purchase | 81% | 95% | 63% |
| Loyal for quality | 89% | 95% | 84% |
| Loyal even though the price increase | 73% | 82% | 68% |
| Loyal even though there is a suggestion to change the product | 64% | 71% | 52% |

Table 8. Attitude towards new products in each segment

| Category | Cluster | | |
|-------------------------------------|---------------|---------------|---------------|
| | 1 (n = 70) | 2 (n = 38) | 3 (n = 75) |
| Looking for new product information | 87% | 95% | 78% |
| Dabble | 74% | 84% | 59% |
| Change to new quality products | 85% | 81% | 70% |

Behavioral Aspects

Aspects of consumption behavior are reviewed based on the following variables:

1. Social tendencies

Table 6 shows the characteristics of the social tendencies of healthy food consumers in each segment. Social tendencies for the attributes of friend invitations, trends, habits in the family, and product choices in cluster 1 have a higher percentage value than clusters 2 and 3. This result is because teenagers dominate cluster 1 members. The characteristics of adolescents tend to be unstable, lack consideration in choices, and tend to follow developing trends (Setyawati & Rimawati, 2016; Aprillia et al., 2015). *Eating habits* are a trend or lifestyle motivated by physiological needs (Sufa et al., 2017b).

2. Consumption Consistency

Table 7 shows the consistent characteristics of healthy food consumers in each segment. The percentage of consumption consistency in cluster 2 is higher than in clusters 1 and 3. Identify the consistency variable using the attributes of regularity in consumption, loyalty due to quality, loyalty despite price increases, and loyalty despite being advised to switch to other products. The total number of members of cluster 2 with pre-obese-obese status is higher than that of other clusters. Preobesity-obesity status is a motivation to consume healthy food to maintain and lose weight. This result also causes the percentage of consumption consistency in cluster 2 to be higher than in other clusters. The commitment to continue consuming healthy food to meet their needs results from an awareness of the positive impact of this behavior. Several things often constrain the consistency of consuming healthy food. Purchase intentions are often constrained by product availability on the market, purchasing power, and situational factors, such as practicality and convenience, even though consumers know the product's value (Novandari, 2011).

3. Attitude Towards New Products

This variable aims to determine the attitude of cluster members towards healthy food products as new products. Attitudes review towards new products is based on attitude to seek product information, willingness to try, and attitude to change to new products. Table 8 shows that more than 50% of the cluster

members in each cluster desire to seek information about new products. Cluster 2 has the highest percentage of seeking new product information and the attitude of trying new products. Cluster 1 members have a higher percentage than clusters 2 and 3 on the attitude attribute of switching to new quality products. This result shows that the characteristics of cluster 1 members are more volatile, easy to make decisions, and sensitive to market changes (Aprillia et al., 2015; Setyawati & Rimawati, 2016) which is following the interpretation of the characteristics of cluster 1 on the social tendency variable (Table 6). These characteristics increase the chance that consumers can accept new products (such as slimming jelly) in cluster 1, but these characteristics can also threaten existing products in the market because consumers switch to other, higher-quality products. A product also needs to respond to changes in consumer preferences with continuous improvement and innovative development so that the product still has a fixed brand position for consumers. Increasing the market share of a product brand in the same industry will be an attraction for new entrants using imitative strategies to imitate products that have been developed (Jamira, 2017).

Targetting

Healthy food consumers are divided into three clusters with different membership numbers and characteristics in the segmentation process. Targeting the market segment that becomes the target market is carried out based on the formed market segmentation. Targeting in this study applies the principle of selective specialization. Selective specialization is choosing several

attractive and appropriate market segments (Jamira, 2017). The selected market segments to be the target market for slimming jelly based on the principle of selective specialization are clusters 1 and 2 (Table 9).

Clusters 1 and 2 were chosen as targets based on the principle of selective specialization because they have characteristics (motivation, social tendencies, consumption consistency, attitude towards new products) that follow the characteristics and functions offered by slimming jelly, namely new products in the form of various fruit-flavored jelly, jelly contains milk (pudding), contains low calories, and high fiber. Products that have a health value will have a higher market penetration potential.

Positioning

Positioning slimming jelly is to highlight the function/benefits of the product for health. Slimming jelly is made from ingredients that are rich in fiber and low in calories. This nutritional content can be one of the product's advantages in meeting consumer demands and differentiating it from competing products (Syah, 2014). Foods high in fiber are good for digestive health, prevent increased cholesterol levels, and control weight and obesity (Santoso, 2011; Fairudz & Nisa, 2015). Slimming jelly is supported by several product tests to achieve the function of delaying hunger that supports diet and weight control programs. Slimming jelly is in the form of jelly and jelly containing milk (pudding). This product is different from healthy food widely produced by the healthy food industry, namely soft drinks, milk-based drinks, snack bars, cookies, crackers, seeds, and cereals.

Table 9. Targeting in clusters 1 and 2 is based on the principle of selective specialization

| Cluster 1 | Cluster 2 |
|--|---|
| 1. Segments with a large number of members | 1. The segment is dominated by consumers in the adult age range |
| 2. The number of consumers with a high adolescent age range | 2. Work and have a fairly high income |
| 3. Have a weight control goal in consuming healthy food | 3. Have a fairly high average healthy food consumption budget |
| 4. Using the benefits of healthy food as a hunger delay | 4. Have weight control motivation in consuming healthy food |
| 5. Has a trend-following lifestyle, likes to socialize | 5. Using healthy food as a product that can delay hunger |
| 6. Regular consumption and quite consistent in consuming healthy food products | 6. Regular and consistent consumption of healthy food products |
| 7. Not too sensitive to price | 7. Not too sensitive to price |
| 8. Open-minded to a new product | 8. Open-minded to a new product |

The ingredients, functions, and product variants of slimming jelly can be used as the basis for the formulation that "slimming jelly is a snack to delay hunger in the form of jelly and pudding that is practical for consumption. These products contain high fiber and are low in calories, so it is good for health. These products can also be used to help diet programs." This positioning will make slimming jelly different from jelly and pudding products in general and different from other healthy food products. According to research by Pangestu (2016), the positioning of health products based on quality, usage, and price can simultaneously influence consumer purchasing decisions.

CONCLUSIONS

Healthy food consumers are grouped into 3 clusters which indicate the market segment of the product. The first segment is dominated by teenagers who have high social tendencies and consume healthy food to delay hunger and body weight control. The second segment is dominated by young-adult women who are more vulnerable to pre-obesity, so that they consume healthy food more often and regularly to delay hunger and to control their body weight. Young-adult women dominate the third segment rarely consume healthy food due to lack of motivation. The first and second segments are the most suitable targeted segments for slimming jelly based on the suitability of cluster characteristics with the product. For the purpose of attractiveness and uniqueness to distinguish it from other competing products, slimming jelly is positioned as a snack to delay hunger in the form of jelly and pudding that is practical for consumption. The product contains high fiber and low calories, hence it is good for health. These products can also help diet programs to maintain health and to lose weight.

ACKNOWLEDGEMENT

This research is part of the Research Institute for Education Fund Management (LPDP) Faculty of Agricultural Technology, Gadjah Mada University.

References

Alfina, T., Santosa, B., & Barakbah, A. R. (2012). Analisa perbandingan metode hierarchical

clustering, k-means dan gabungan keduanya dalam cluster data (Studi kasus : Problem kerja praktek Jurusan Teknik Industri ITS). *Jurnal Teknik*, 1(1), A521–A525.

Aprillia, W., Mintarti, S. U., & Utomo, S. H. (2015). Pengaruh latar belakang sosial ekonomi orang tua, pendidikan ekonomi di keluarga dan economic literacy terhadap perilaku konsumsi mahasiswa. *Jurnal Pendidikan Humaniora*, 3(1), 78–84.

Badan Penelitian dan Pengembangan Kesehatan. (2018). *Hasil Utama RISKESDAS*. Jakarta: Kementerian Kesehatan Republik Indonesia.

Badan Pengawas Obat dan Makanan. Peraturan Kepala Badan Pengawas Obat dan Makanan Republik Indonesia Nomor 13 Tahun 2016 Tentang Pengawasan Klaim Pada Label dan Iklan Pangan Olahan (2016). Indonesia.

Badan Standardisasi Nasional. (1994). *SNI 01-3552-1994 Jelly Agar*. Jakarta: Badan Standardisasi Nasional.

Daryanto. (2011). *Sari Kuliah Manajemen Pemasaran*. Bandung: Satu Nusa.

Direktorat Jenderal Bina Gizi dan Kesehatan Ibu dan Anak. (2018). *Pedoman Pencegahan dan Penanggulangan Kegemukan dan Obesitas pada Anak Sekolah*. Jakarta: Kementerian Kesehatan Republik Indonesia.

Fairudz, A., & Nisa, K. (2015). Pengaruh serat pangan terhadap kadar kolesterol penderita overweight. *Majority (Medical Journal of Lampung University)*, 4(8), 121–126.

Ferdinand, A. (2014). *Metode Penelitian Manajemen*. Semarang: Badan Penerbit Universitas Diponegoro.

Ferrel, O. C., & Hartline, M. D. (2014). *Marketing Strategy Text and Cases* (6th ed.). Boston: Cengage Learning.

Ginis, K. A. M., McEwan, D., Josse, A. R., & Phillips, S. M. (2012). Body image change in obese and overweight women enrolled in a weight-loss intervention: The importance of perceived versus actual physical changes. *Body Image*, 9(3), 311–317. <https://doi.org/10.1016/j.bodyim.2012.04.002>

Gujarati, D. N., Porter, D. C., & Mangunsong, R. C. (2015). *Dasar-dasar Ekonometrika* (5th ed.). Jakarta: Salemba Empat.

Hendryadi. (2017). Validitas isi: Tahap awal pengembangan kuesioner. *JRMB (Jurnal Riset Manajemen Dan Bisnis) Fakultas Ekonomi UNIAT*, 2(2), 169–178. <https://doi.org/10.36226/jrmb.v2i2.47>

- Jamira, A. (2017). Analisis segmentasi, targeting dan positioning studi kasus keripik kentang leo. *Jurnal Ilmiah Universitas Batanghari Jambi*, 17(3), 235–242.
- Kotler, P., & Keller, K. L. (2012). *Marketing Management* (14th ed.). New Jersey: Prentice Hall.
- Kraak, V. I., Englund, T., Misyak, S., & Serrano, E. L. (2017). A novel marketing mix and choice architecture framework to nudge restaurant customers toward healthy food environments to reduce obesity in the United States. *Obesity Reviews*, 18(8), 852–868. <https://doi.org/10.1111/obr.12553>
- Kusnanto, Sundari, P. M., Asmoro, C. P., & Arifin, H. (2019). Hubungan tingkat pengetahuan dan diabetes self-management dengan tingkat stres pasien diabetes melitus yang menjalani diet. *Jurnal Keperawatan Indonesia*, 22(1), 31–42. <https://doi.org/10.7454/jki.v22i1.780>
- Lawshe, C. H. (1975). A quantitative approach to content validity. *Personnel Psychology*, 28(4), 563–575. <https://doi.org/10.1111/j.1744-6570.1975.tb01393.x>
- Martins, W. H. B., Sutriningsih, A., & Dewi, N. (2018). Pengaruh konseling aktivitas fisik dan pola makan terhadap perubahan imt pada penderita diabetes mellitus di Puskesmas Dinoyo Kecamatan Lowokwaru Kota Malang. *Nursing News : Jurnal Ilmiah Keperawatan*, 3(1), 191–203.
- Ng, M., Fleming, T., Robinson, M., Thomson, B., Graetz, N., Margono, C., ... Gakidou, E. (2014). Global, regional, and national prevalence of overweight and obesity in children and adults during 1980–2013: a systematic analysis for the Global Burden of Disease Study 2013. *The Lancet*, 384(9945), 766–781. [https://doi.org/10.1016/S0140-6736\(14\)60460-8](https://doi.org/10.1016/S0140-6736(14)60460-8)
- Novandari, W. (2011). Analisis motif pembelian dan profil perilaku "green product customer" (Studi pada konsumen produk pangan organik di Purwokerto). *Jurnal Ekonomi, Bisnis, Dan Akuntansi*, 13(1), 9–16.
- Nurlaila. (2017). Pengaruh terpaan iklan weight rejuvenation program (wrp) terhadap keputusan membeli produk wrp (Studi pada kalangan perempuan di Kecamatan Penajam). *Dunia Komunikasi : Jurnal Ilmu Komunikasi Universitas Mulawarman*, 5(3), 323–337.
- Nusa, A. F. A., & Adi, A. C. (2013). Hubungan faktor perilaku, frekuensi konsumsi fast food, diet dan genetik dengan tingkat kelebihan berat badan. *Media Gizi Indonesia*, 9(1), 20–27.
- Pangestu, J. A. A. (2016). Analisis pengaruh strategi positioning terhadap keputusan pembelian produk herbal nutrend. *JURNAL RISET BISNIS DAN MANAJEMEN*, 4(2), 201–208.
- Puspawati, R. H., & Briawan, D. (2014). Persepsi tentang pangan sehat, alasan pemilihan pangan dan kebiasaan makan sehat pada mahasiswa. *Jurnal Gizi Pangan*, 9(3), 211–218.
- Putri, R. A., Shaluhiah, Z., & Kusumawati, A. (2020). Faktor-faktor yang berhubungan dengan perilaku makan sehat pada remaja SMA di Kota Semarang. *Jurnal Kesehatan Masyarakat*, 8(4), 564–573.
- Rheinnadia, Irwanto, A. K., & Najib, M. (2016). Peran atribut produk dalam keputusan pembelian terkait strategi pemasaran Soyjoy di area Bogor. *Manajemen IKM : Jurnal Manajemen Pengembangan Industri Kecil Menengah*, 11(2), 123–128.
- Rizka, S. K., Purnamadewi, Y. L., & Hasanah, N. (2018). Produk roti dalam pola konsumsi pangan dan keberadaan label halal dalam keputusan konsumsi masyarakat (Kasus: Kota Bogor). *Al-Muzara'ah*, 6(1), 15–27. <https://doi.org/10.29244/jam.6.1.15-27>
- Santoso, A. (2011). Serat pangan (dietary fiber) dan manfaatnya bagi kesehatan. *Magistra*, 23(75), 35–40.
- Sarti, S., Darnall, N., & Testa, F. (2018a). Market segmentation of consumers based on their actual sustainability and health-related purchases. *Journal of Cleaner Production*, 192, 270–280. <https://doi.org/10.1016/j.jclepro.2018.04.188>
- Sarti, S., Darnall, N., & Testa, F. (2018b). Market segmentation of consumers based on their actual sustainability and health-related purchases. *Journal of Cleaner Production*, 192, 270–280. <https://doi.org/10.1016/j.jclepro.2018.04.188>
- Sarwono, J. (2006). *Korelasi*. Bandung: Universitas Wanita Internasional.
- Septiani, R., & Raharjo, B. B. (2017). Pola konsumsi fast food, aktivitas fisik dan faktor keturunan terhadap kejadian obesitas (Studi kasus pada siswa SD Negeri 01 Tonjong Kecamatan Tonjong Kabupaten Brebes). *Public Health Perspective Journal*, 2(3), 262–269.
- Setyawati, V. A. V., & Rimawati, E. (2016a). Pola konsumsi fast food dan serat sebagai faktor gizi lebih pada remaja. *Unnes Journal of Public Health*, 5(3), 275–284. <https://doi.org/10.15294/ujph.v5i3.16792>
- Setyawati, V. A. V., & Rimawati, E. (2016b). Pola konsumsi fast food dan serat sebagai faktor gizi lebih pada remaja. *Unnes Journal of Public Health*,

- 5(3), 275–284. <https://doi.org/10.15294/ujph.v5i3.16792>
- Sufa, S. A., Christantyawati, N., & Jusnita, R. A. E. (2017a). Tren gaya hidup sehat dan saluran komunikasi pelaku pola makan food combining. *Jurnal Komunikasi Profesional*, 1(2), 105–120. <https://doi.org/10.25139/jkp.v1i2.473>
- Sufa, S. A., Christantyawati, N., & Jusnita, R. A. E. (2017b). Tren gaya hidup sehat dan saluran komunikasi pelaku pola makan food combining. *Jurnal Komunikasi Profesional*, 1(2), 105–120. <https://doi.org/10.25139/jkp.v1i2.473>
- Supit, G., Kumaat, R. M., & Loho, A. E. (2016). Strategi pemasaran produk Herbalife (Studi kasus Rumah Nutrisi Green). *Agri-Sosioekonomi*, 12(3), 105–112. <https://doi.org/10.35791/agrsosek.12.3.2016.14056>
- Sütterlin, B., Brunner, T. A., & Siegrist, M. (2011). Who puts the most energy into energy conservation? A segmentation of energy consumers based on energy-related behavioral characteristics. *Energy Policy*, 39(12), 8137–8152. <https://doi.org/10.1016/j.enpol.2011.10.008>
- Syah, D. (2014). Healty food industry sebagai sumber pertumbuhan dan pemerataan; Strategis dan peran ABG. In *Konferensi PDMA dan CIC "Facing ASEAN Economic Community 2015 Through Product Development and Innovation Strategies* (pp. 1–12). Jakarta.
- Tania, D., & Dharmayanti, D. (2014). Market segmentation, targeting, dan brand positioning dari Winston Premier Surabaya. *Jurnal Manajemen Pemasaran Petra*, 2(1), 1–7.
- Verain, M. C. D., Sijtsema, S. J., & Antonides, G. (2016). Consumer segmentation based on food-category attribute importance: The relation with healthiness and sustainability perceptions. *Food Quality and Preference*, 48, 99–106. <https://doi.org/10.1016/j.foodqual.2015.08.012>
- Yusup, F. (2018). Uji validitas dan reliabilitas instrumen penelitian kuantitatif. *Tarbiyah : Jurnal Ilmiah Kependidikan*, 7(1), 17–23. <https://doi.org/10.18592/tarbiyah.v7i1.2100>