
HEALTHY FOOD CUSTOMER SEGMENTATION USING K-MEANS CLUSTERING: A CASE STUDY OF URBAN CONSUMERS - JABODETABEK

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Abstract: *As awareness of health and nutrition increases among urban populations, particularly working professionals, the demand for healthy food continues to rise. This study aims to segment healthy food consumers in the Jabodetabek region based on demographic profiles, consumption behavior, motivations, and preferences to inform more targeted product development and marketing strategies. Data were collected through an online questionnaire distributed to 152 respondents working in Jakarta and surrounding areas, with 150 valid responses analyzed after data cleaning. Respondents came from diverse educational and income backgrounds. Using K-Means clustering analysis in SPSS, the study identified five distinct consumer segments categorized by motivations, purchasing channels, and spending levels. Each segment revealed unique consumption behaviors and priorities. Among them, the “Health-Conscious Supermom” emerged as the most strategic target. This group consists of women aged 31–40 with a normal Body Mass Index (BMI), who consistently prioritize healthy, low-sugar, and family-oriented food choices. They shop through both supermarkets and online channels, valuing convenience and quality. The findings highlight how data-driven segmentation can help businesses develop tailored offerings, improve customer engagement, and build stronger brand loyalty. By aligning product and marketing approaches with consumer-specific needs, companies can thrive in the increasingly competitive healthy food market and support broader public health initiatives.*

Keywords: *Healthy Food, Consumer Segmentation, K-Means Clustering, SPSS, Marketing Strategy.*

Abstrak: Seiring meningkatnya kesadaran akan kesehatan dan gizi di kalangan penduduk perkotaan, terutama para profesional yang bekerja, permintaan akan makanan sehat terus meningkat. Studi ini bertujuan untuk mengelompokkan konsumen makanan sehat di wilayah Jabodetabek berdasarkan profil demografi, perilaku konsumsi, motivasi, dan preferensi untuk menginformasikan strategi pengembangan produk dan pemasaran yang lebih terarah. Data dikumpulkan melalui kuesioner daring yang disebarkan kepada 152 responden yang bekerja di Jakarta dan sekitarnya, dengan 150 tanggapan valid dianalisis setelah pembersihan data. Responden berasal dari beragam latar belakang pendidikan dan pendapatan. Menggunakan analisis pengelompokan K-Means di SPSS, studi ini mengidentifikasi lima segmen konsumen berbeda yang dikategorikan berdasarkan motivasi, saluran pembelian, dan tingkat pengeluaran. Setiap segmen mengungkapkan perilaku dan prioritas konsumsi yang unik. Di antara mereka, "Ibu Super yang Sadar Kesehatan" muncul sebagai target paling strategis. Kelompok ini terdiri

dari perempuan berusia 31–40 tahun dengan Indeks Massa Tubuh (IMT) normal, yang secara konsisten memprioritaskan pilihan makanan sehat, rendah gula, dan berorientasi keluarga. Mereka berbelanja melalui supermarket dan saluran daring, menghargai kenyamanan dan kualitas. Temuan ini menyoroti bagaimana segmentasi berbasis data dapat membantu bisnis mengembangkan penawaran yang disesuaikan, meningkatkan keterlibatan pelanggan, dan membangun loyalitas merek yang lebih kuat. Dengan menyelaraskan pendekatan produk dan pemasaran dengan kebutuhan spesifik konsumen, perusahaan dapat berkembang pesat di pasar makanan sehat yang semakin kompetitif dan mendukung inisiatif kesehatan masyarakat yang lebih luas.

Kata Kunci: Makanan Sehat, Segmentasi Konsumen, Pengelompokan K-Means, SPSS, Strategi Pemasaran.

I. INTRODUCTION

In recent years, urbanization and the fast-paced lifestyle of modern cities have significantly influenced eating behaviors in Indonesia. Urban residents, especially working professionals, are increasingly exposed to instant and processed foods that prioritize convenience over nutrition. These foods are often high in sodium, saturated fats, sugars, and food additives such as monosodium glutamate (MSG) and artificial preservatives. According to Indonesia's National Agency of Drug and Food Control (BPOM, 2023), over 40% of packaged foods in the domestic market contain excessive levels of food additives. This trend has raised public health concerns, particularly as non-communicable diseases such as obesity, hypertension, and type 2 diabetes become more prevalent. The Indonesian Ministry of Health (Riskesmas, 2018) reported that the adult obesity rate increased from 14.8% in 2013 to 21.8% in 2018, highlighting the urgent need for healthier dietary habits.

In response to these health issues, a growing number of urban consumers have started to adopt healthier eating patterns. This shift is characterized by a greater demand for clean-label, organic, low-sugar, and nutrient-dense foods. Healthy food, as defined by the World Health Organization (WHO), consists of foods that contribute to daily nutritional needs, including adequate amounts of fiber, vitamins, and minerals, while being low in saturated fats, added sugars, and sodium. These include fresh fruits and vegetables, whole grains, lean proteins, and healthy fats such as those found in nuts and seeds. Healthy foods are often minimally processed and free from artificial colors, preservatives, and additives, making them beneficial for long-term health and disease prevention.

In addition to their nutritional value, healthy foods also offer psychological and emotional benefits. Individuals who consume nutritious diets are more likely to experience improved mood, better concentration, and reduced risk of anxiety and depression. This growing awareness of the holistic benefits of a healthy diet further reinforces the shift toward more mindful eating practices in urban environments. As consumers become more educated about the consequences of poor diet, their willingness to invest in healthier food choices increases, even if these options are perceived as more expensive.

This growing demand presents an opportunity for businesses in the food sector to align their products and services with the evolving preferences of health-conscious consumers. However, the healthy food market is highly diverse. Consumers differ in their motivations, preferences, income levels, and lifestyle choices. Some are driven by medical needs, such as managing diabetes or cholesterol, while others are influenced by body image, environmental concerns, or social trends such as veganism or fitness challenges. Without a clear understanding of these differing consumer profiles, food producers risk creating generic marketing campaigns that fail to resonate with specific audience segments.

To address this challenge, market segmentation becomes a vital strategy. Market segmentation refers to the process of dividing a broad consumer market into sub-groups based on shared characteristics such as demographics, behavior, geography, and psychographics. This enables businesses to tailor their offerings more precisely and improve marketing effectiveness. For example, a segment of health-conscious middle-aged professionals may value meal subscriptions with controlled calorie content, while young adults may prioritize affordable healthy snacks that are easy to consume on the go.

Market segmentation also plays a critical role in informing pricing, branding, and communication strategies. Consumers who prioritize health for medical reasons may be more influenced by evidence-based product labeling and clinical endorsements, whereas younger consumers may respond better to aesthetic branding and influencer marketing. Therefore, a one-size-fits-all approach is no longer effective in today's competitive market. Strategic segmentation helps ensure that product offerings and marketing messages resonate with the specific needs and aspirations of different consumer groups.

Urban regions like Jakarta and its surrounding metropolitan area (Jabodetabek) provide a unique setting to explore consumer segmentation in the healthy food market. This region is

characterized by high population density, economic diversity, and an active digital consumer base. At the same time, it reflects the broader shift in Indonesia toward greater health awareness. Data from Euromonitor International (2023) shows that the health and wellness food sector in Indonesia is growing at a rate of 8–10% annually, underscoring a substantial opportunity for innovation and business growth in this space.

Understanding market segments allows companies to align their marketing messages, pricing strategies, and product innovations more effectively with consumer expectations. By doing so, businesses can improve customer satisfaction and loyalty, reduce marketing waste, and identify new opportunities for growth. In the context of healthy food, segmentation also helps companies address specific health-related needs of consumers, such as gluten intolerance, vegetarian diets, or low-carb preferences, thereby increasing product relevance.

Moreover, segmenting the market allows companies to track trends and adapt more efficiently. For example, in recent years, the popularity of plant-based diets has surged, with many consumers shifting away from animal-based products for both health and environmental reasons. Similarly, there has been an increase in demand for functional foods, such as those enriched with probiotics or antioxidants. By identifying these shifts early within specific consumer segments, businesses can adapt their strategies accordingly to stay ahead of competitors and remain relevant to their target audience.

Despite the promising outlook, challenges persist. Many small and medium-sized enterprises (SMEs) lack the resources or expertise to conduct effective market segmentation. Moreover, consumer behavior is constantly evolving, influenced by social media trends, public health campaigns, and emerging lifestyle choices. These dynamic factors require businesses to remain agile and continuously adapt their segmentation strategies to maintain relevance. In this regard, collaboration with nutritionists, data analysts, and marketing professionals becomes essential for developing an evidence-based and responsive business model.

This study aims to fill the knowledge gap by applying clustering analysis to segment healthy food consumers in the Jabodetabek region. The objective is to identify key consumer segments based on demographic profiles, motivations, and consumption patterns. By understanding these segments, businesses can design more effective marketing strategies, develop products that align with consumer preferences, and enhance overall customer satisfaction.

In conclusion, the growing prevalence of diet-related health issues and the increasing demand for nutritious, minimally processed foods have created both challenges and opportunities in the urban food market. With clear definitions of healthy food and market segmentation methods, food producers and marketers can better navigate this complex landscape. Businesses that invest in understanding their consumer segments will not only improve their market competitiveness but also contribute positively to public health outcomes. This research seeks to contribute actionable insights for businesses aiming to thrive in the evolving healthy food industry in Indonesia.

II. RESEARCH METHOD

Consumer segmentation enables businesses to identify and target specific groups within a broader market by analyzing unique characteristics, preferences, and behaviors. In the healthy food sector, this approach supports the creation of targeted products and marketing strategies that improve customer satisfaction and loyalty. A commonly used method for segmentation is the K-Means clustering algorithm, an unsupervised machine learning technique that groups individuals based on data similarities. This technique has been effectively applied in food industry studies. For example, Yuliaji et al. (2023) used K-Means clustering to classify consumers of health-oriented and eco-friendly fast food restaurants into three segments based on environmental concern, health awareness, and purchasing behavior. Likewise, Yustina (2021) employed K-Means to segment healthy food consumers, uncovering key differences in demographics, motivations, and consumption habits. These findings demonstrate the value of K-Means clustering in generating actionable insights for more targeted and effective marketing in the healthy food industry.

This study adopts a quantitative research approach, where numeric data was collected and statistically processed to identify patterns or behavioral relationships. The data was collected through an online questionnaire consisting of questions related to:

No	Kategori Variabel	Nama Variabel	Deskripsi
1	Demographic	Gender	Respondent's gender
2	Demographic	Age	Respondent's age
3	Demographic	Weight and Height	Used to calculate Body Mass Index (BMI)
4	Demographic	Educational Background	Respondent's educational background
5	Demographic	Region of Residence	Respondent's place of residence
6	Behavioral & Consumption	Frequency of Consuming Healthy Food	How often the respondent consumes healthy food per week
7	Behavioral & Consumption	Types of Healthy Food Most Frequently Consumed	Types of healthy food most often consumed
8	Behavioral & Consumption	Total Monthly Expenditure	Total monthly spending (all expenses)
9	Behavioral & Consumption	Monthly Expenditure on Healthy Food	Monthly spending specifically on healthy food
10	Behavioral & Consumption	Reasons for Choosing Healthy Food	Main reasons for choosing healthy food
11	Behavioral & Consumption	Preferred Place to Buy Healthy Food	Preferred place to purchase healthy food
12	Behavioral & Consumption	Monthly Income	Respondent's monthly income

A total of 152 responses were collected. After filtering out 2 incomplete responses, 150 valid entries were included in the final analysis.

The data were then analyzed using the K-Means clustering method with the help of SPSS software to identify homogeneous groups of healthy food consumers based on similarities in their demographic profiles, motivations, and consumption patterns. The result of this analysis is presented in the form of clusters, each representing a distinct consumer persona that is actionable and relevant for strategic planning in the healthy food sector.

Steps in Data Processing Using K-Means Clustering

1. Design and Distribution of Questionnaire:

The questionnaire was carefully designed to capture relevant demographic and behavioral data. It was distributed online to a diverse set of respondents.

2. Data Collection and Cleaning:

A total of 152 responses were received. Responses with incomplete information (2 entries) were removed, resulting in 150 clean and valid data entries.

3. Data Input and Preparation in SPSS:

The collected data were input into SPSS, where necessary transformations were applied (e.g., calculating Body Mass Index from height and weight).

4. Running the K-Means Algorithm:

K-Means clustering was executed in SPSS. The optimal number of clusters was estimated using supporting techniques such as the Elbow Method.

5. Cluster Interpretation:

Each cluster was analyzed and profiled based on the dominant characteristics and behaviors of its members.

6. Persona Development:

From the clustering output, consumer personas were developed to assist in segmentation-based strategy formulation for product and marketing purposes.

Why K-Means Method Was Chosen

The K-Means clustering method was chosen in this study due to several advantages:

- **Simplicity and Efficiency:**

K-Means is easy to implement and computationally efficient, making it suitable for large datasets. It allows for fast grouping of respondents into meaningful clusters.

- **Capability to Handle Large-Scale Data:**

K-Means is well-suited for handling large volumes of data, especially when the number of clusters is predetermined or can be estimated using methods such as the Elbow Method.

- **Ease of Interpretation:**

The clustering output is straightforward to interpret, as each data point is assigned to the cluster with the nearest centroid, making it easier to describe and label the resulting consumer segments.

Benefits of K-Means Clustering in This Study

- **Effective Segmentation:**

Helps in identifying groups of healthy food consumers who share similar behaviors, preferences, and consumption patterns.

- **Marketing and Product Optimization:**

Enables businesses to tailor their marketing strategies and product offerings according to the needs of each segment.

- **Better Decision-Making:**

Provides a strong foundation for more accurate decisions in product development, pricing, distribution, and communication strategies..

III. RESULTS AND DISCUSSION

To gain deeper insights into the structure of the healthy food consumer market, the results of the K-Means clustering analysis are presented in the following table. This analysis enabled the identification of distinct consumer groups based on shared demographic traits, dietary

preferences, expenditure behavior, and shopping channels. By examining the characteristics of each cluster, we can formulate targeted marketing strategies and product development approaches that better align with the unique needs of each segment. The five clusters identified are summarized below:

Table 1. Display of K-Means Clustering Results

	Final Cluster Centers				
	Cluster				
	1	2	3	4	5
jenis kelamin: Laki-laki	0,11	0,89	0,95	0,29	0,53
jenis kelamin: Perempuan	0,89	0,11	0,05	0,71	0,47
Usia: < 20 tahun	-	0,03	-	-	-
Usia: > 50 tahun	-	0,11	0,16	0,21	0,16
Usia: 21 tahun - 30 tahun	0,16	0,63	0,05	0,08	0,44
Usia: 31 tahun - 40 tahun	0,58	0,05	0,58	0,46	0,06
Usia: 41 tahun - 50 tahun	0,26	0,18	0,21	0,25	0,34
underweight	-	-	0,03	-	0,06
normal	0,58	0,24	0,34	0,08	0,88
overweight	0,21	0,55	0,18	0,38	-
obesity	0,21	0,21	0,45	0,54	0,06
Pendidikan: SMA	0,16	0,05	0,08	-	0,19
Pendidikan: Diploma	0,21	0,18	0,11	0,04	0,13
Pendidikan: S1	0,63	0,63	0,58	0,75	0,56
Pendidikan: S2	-	0,13	0,24	0,21	0,13
Lokasi: Bekasi	-	0,05	0,18	0,25	0,09
Lokasi: Bogor	0,16	0,11	0,05	-	0,06
Lokasi: Depok	0,11	0,11	0,21	0,17	0,06
Lokasi: Jakarta Barat	-	0,03	0,08	-	0,03
Lokasi: Jakarta Pusat	0,11	0,05	0,03	0,04	0,03
Lokasi: Jakarta Selatan	0,16	0,08	0,08	0,13	0,38
Lokasi: Jakarta Timur	0,26	0,42	0,16	0,25	0,28
Lokasi: Jakarta Utara	-	0,03	-	0,08	-
Lokasi: Tangerang	-	0,03	0,08	0,04	0,06
Lokasi: Tangerang Selatan	0,21	0,11	0,13	0,04	-
Pendapatan/bulan: < 5,000,000	0,11	0,08	0,05	0,17	0,03
Pendapatan/bulan: 10,000,001 - 20,000,000	0,26	0,16	0,21	0,50	0,13
Pendapatan/bulan: 20,000,001 - 30,000,000	0,26	0,13	0,21	0,04	0,06
Pendapatan/bulan: 30,000,001 - 40,000,000	0,11	0,05	0,05	0,04	0,16
Pendapatan/bulan: 40,000,001 - 50,000,000	-	-	-	-	0,09
Pendapatan/bulan: > 50,000,000	-	0,18	0,11	0,08	0,03
frekuensi konsumsi: Tidak pernah	-	0,03	0,03	-	-
frekuensi konsumsi: 1 - 2 kali	0,37	-	0,55	0,54	0,31
frekuensi konsumsi: 3 - 5 kali	0,53	0,82	0,18	0,33	0,03
frekuensi konsumsi: > 5 kali	0,11	0,16	0,24	0,13	0,66
Jenis makanan sehat: Rendah gula	0,26	0,21	0,50	0,63	0,28
Jenis makanan sehat: Makanan Organik	0,05	0,39	0,05	0,04	0,13
Jenis makanan sehat: Produk rendah kalori	0,26	0,18	0,13	0,21	0,19
Jenis makanan sehat: Bebas gluten	-	0,03	0,05	-	0,03
Jenis makanan sehat: Vegetarian	0,42	0,18	0,26	0,13	0,38
konsumsi/bulan: < 1,000,000	0,16	0,08	0,42	0,13	0,06
konsumsi/bulan: 1,000,001 - 3,000,000	0,21	0,79	0,13	0,67	0,56
konsumsi/bulan: 3,000,000 - 5,000,000	0,37	0,08	0,32	0,17	0,16
konsumsi/bulan: > 5,000,000	0,26	0,05	0,13	0,04	0,22

konsumsi makanan sehat: <1,000,000	-	-	-	-	-
konsumsi makanan sehat: 1,000,001 - 2,000,000	0,32	0,32	0,21	0,63	0,28
konsumsi makanan sehat: 2,000,001 - 3,000,000	0,37	0,13	0,03	-	0,22
konsumsi makanan sehat: 3,000,000 - 5,000,000	-	-	-	-	-
konsumsi makanan sehat: >5,000,000	-	0,03	0,11	0,04	0,03
alasan: Alasan kesehatan	0,26	0,82	0,68	0,33	0,88
alasan: Anjuran dokter	0,05	-	-	0,04	-
alasan: Diet	0,63	0,08	0,05	0,50	0,06
alasan: lain-lain	0,05	0,11	0,26	0,13	0,06
tempat beli: Catering	-	0,13	0,05	0,08	-
tempat beli: Restoran khusus	-	0,08	0,13	0,04	-
tempat beli: Supermarket	0,95	0,71	0,53	0,21	0,94
tempat beli: Toko online	0,05	0,08	0,29	0,67	0,06

From the results of the K-MEANS process conducted using SPSS, the researcher developed the following personas, target segments, and value propositions:

The results of the K-Means clustering analysis revealed five distinct consumer personas, each with unique demographic characteristics, dietary preferences, spending patterns, and purchase channels. These segments provide meaningful insights into how businesses can tailor their healthy food offerings and marketing strategies in urban Indonesian markets, particularly within the Jabodetabek area.

Health-Conscious Supermom



This segment consists of women aged 31–40 with a normal body weight. They prioritize healthy eating for themselves and their families, with a strong preference for vegetarian options, low-sugar, and low-calorie foods. They spend between 1–3 million IDR monthly on healthy food, and their total household spending ranges from 3–5 million IDR per month. Their dominant shopping channel is the supermarket, indicating that this group values familiarity, access to fresh produce, and possibly the ability to inspect items before purchasing. This persona reflects health-focused mothers who actively integrate wellness into household food planning.

Young Organic Explorer



This persona includes young men aged 21–30 who are overweight but show growing interest in organic and plant-based eating. They favor organic food, vegetarian meals, and low-calorie options. Spending under 2 million IDR per month on healthy food, they operate on a modest budget with total monthly expenditures ranging from 1–3 million IDR. They prefer shopping at supermarkets, likely due to cost sensitivity and convenience. These individuals represent a segment of price-conscious, aspirational consumers beginning their journey toward healthier living.

Balanced Health Hunter



This cluster comprises males aged 21–40 with a mix of overweight and normal body weight status. Their dietary focus is on low-sugar and vegetarian options, indicating an effort to balance nutritional needs with practicality. Their monthly healthy food budget is under 2 million IDR, and their total household expenses range from 1–3 million IDR. They split their purchases between supermarkets and online platforms, reflecting flexibility in shopping behavior. This persona embodies health-aware individuals who seek both convenience and control in managing their food choices.

Digital Family Food Planner



This group is dominated by overweight females aged 31–50 who actively plan family meals and prefer healthy options such as low-sugar and low-calorie foods. They spend between 1–2 million IDR per month on healthy food and a total of 1–3 million IDR monthly. Their dominant purchase channel is online stores, suggesting digital literacy, time-saving preferences, and trust in e-commerce platforms. These consumers are busy parents who rely on online solutions for household nutrition planning, making them an ideal target for subscription-based or curated meal package services.

Mature Wellness Shopper



The final segment includes health-conscious males aged 41–50 with normal weight. Their healthy food preferences include vegetarian, low-sugar, and low-calorie diets. Although their spending on healthy food is relatively modest—mostly below 1 million IDR per month—their total household spending remains between 1–3 million IDR. They rely heavily on online stores for food purchases, indicating digital savviness and preference for convenience. These are individuals with well-established routines and consistent health behaviors, making them highly receptive to loyalty programs or long-term meal planning services.

Target Persona Penetration Strategy

Following the results of the cluster analysis, the most strategic direction for marketing and product development is to focus on the persona identified as the “Health-Conscious Supermom.” This group reflects a growing demographic of women in their 30s who are deeply committed to maintaining the health and wellbeing of their families through conscious food choices and balanced daily routines.

These women are typically aged between 31 and 40 years, with a normal body mass index (BMI), and maintain a monthly household expenditure of 3–5 million IDR, with 1–3 million IDR specifically allocated to healthy food. They consistently choose food options that are vegetarian, low in sugar, and low in calories, not because of medical necessity, but because of a genuine and internalized understanding of long-term health benefits. This persona tends to purchase from supermarkets, which offer them control, variety, and trust — all essential in their buying process.

Unlike trend-followers, the Health-Conscious Supermom is a proactive wellness advocate — not only for herself, but also for her spouse and children. She sees food as the foundation of her family’s health, and values practicality, affordability, and transparency when selecting what to feed her loved ones.

To support her lifestyle, we propose a value-driven approach that combines healthy food offerings with a flexible and family-oriented online shopping experience. While she may prefer in-store grocery shopping for fresh produce, she is also receptive to convenient online solutions that save her time and energy, as long as they maintain her standards for quality and nutrition.

As part of our online value proposition, we suggest launching a range of curated, nutritious meal bundles tailored to family needs. These bundles can be delivered through a subscription-based system, where she can customize menus, adjust delivery dates, and manage her plans directly through a user-friendly digital platform. Here are a few examples of offerings aligned with her preferences:

- **Fit Family Favorites:** Meal sets for shared dinners, including brown rice, grilled chicken, sautéed vegetables, and fresh fruit. Ideal for busy weekday evenings. (Price range: 200,000–300,000 IDR for 3-day supply)
- **Smart Kids Lunchbox Set:** Pre-packed, child-friendly meals such as vegetable wraps, baked sweet potatoes, and fruit cups — perfect for school lunches. (Price range: 150,000–250,000 IDR for 5 lunches)
- **Mom’s Wellness Plan:** A special bundle just for her, featuring low-calorie meals like quinoa bowls, tofu salads, and green smoothies to help her stay energized. (Price range: 180,000–250,000 IDR for 3 days)
- **Vegetarian Week Starter Kit:** A fully plant-based weekly meal plan including lentil soup, grilled tempeh, and stir-fried vegetables — perfect for families aiming to reduce meat intake. (Price range: 300,000–400,000 IDR per week)

To enhance the experience, this digital solution could include features such as smart reminders for weekly planning, nutritional dashboards to track family intake, access to quick expert chats, and a wellness rewards program that motivates consistent healthy behavior. By integrating convenience with purpose, the platform becomes more than just a store — it becomes her trusted partner in wellness.

What makes this persona especially valuable is her role as a health influencer within her household and community. When she finds a brand that aligns with her values and makes life easier, she will naturally recommend it to her peers — creating ripple effects through parenting networks, wellness groups, and social circles.

In conclusion, targeting the Health-Conscious Supermom with thoughtfully designed, family-oriented healthy food solutions — delivered with digital ease and personalization — presents a strong opportunity for business growth. This strategy not only reflects shifting

consumer behavior toward preventive wellness, but also reinforces the brand's position as a practical, caring, and empowering presence in the everyday lives of modern families.

IV. CONCLUSION AND SUGGESTIONS

This study successfully segmented healthy food consumers in urban areas using the K-Means clustering method. From an online survey of 150 valid respondents, five distinct consumer segments were identified based on demographics, consumption habits, motivations, and shopping preferences.

Among the segments, the "Health-Conscious Supermom" was identified as a key target persona. This group consists of women aged 31–40 with a normal BMI who consistently choose healthy foods such as vegetarian, low-sugar, and low-calorie meals. Their motivation comes from personal health awareness, and they often shop at supermarkets while showing interest in more convenient digital options.

This persona offers great potential for businesses to develop family-friendly, practical, and nutritious meal solutions, such as weekly food bundles or healthy lunch sets, supported by flexible online ordering or subscriptions. With strong purchasing habits and influence over household food decisions, this group is also valuable for building brand loyalty and community engagement.

The findings show that data-driven segmentation helps companies better understand their customers and create more relevant products and marketing strategies. By focusing on high-potential segments like the Health-Conscious Supermom, businesses can grow more effectively in the competitive healthy food market.

In short, understanding different consumer types is essential for success, and this study provides a solid base for future planning and innovation.

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