Research On Marketing Strategy Optimization of Healthy Food Based on Analysis of Consumer Behavior Characteristics——Take Mint Health APP For Example

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Abstract: With the increasing popularity of a healthy lifestyle, people pay more attention to healthy food. Under that circumstance, many companies selling healthy food have sprung up, and many snack companies have expanded their businesses to sell healthy food. It can be seen that the sales competition of healthy food in the industry is fierce. Therefore, it is of great significance to research marketing strategy optimization healthy food based on analysis of consumer behavior characteristics. Based on the preliminary investigation, we made questionnaires related to consumers' behavioral intentions. We issued the questionnaire to obtain data to solve the existing problems of promoting sales of healthy food. Then, we performed multiple linear regression analyses using Minitab software based on the valid data received. Next, we can obtain the main influencing factors of user satisfaction through the results of data analysis. The four factors are taste, price, satiety, and packaging. We also came up with targeted response measures. To sum up, we know that the marketing strategies and specific implementation measures studied in this paper can effectively promote the sales of healthy food in the Mint Health APP. These strategies will provide advice for Mint Health APP and inspire the future development of the health food industry.

1. Introduction

1.1 Research background

As the concept of healthy life becomes more and more popular among people, losing weight, keeping fit, and keeping healthy has become a hot topic in people's daily life. There are lots of healthy food in the market gradually. 0 calories, low carbon, low fat, no sugar frequently appear in the packaging and advertising and increasingly become people's pursuit of ideas unconsciously. Take today's most representative Mint health APP, for example. In the past 30 days, its official account on a popular social media platform increased by 164,800 fans and 464,300 likes. In the increasingly competitive market environment, defining the characteristics and needs of customers, optimizing the company's marketing strategies, and finally forming the own core competitiveness is a critical issue in the current situation. A good marketing plan can improve corporate profits and promote economic prosperity in the new era and keep up with consumer demand, improve people's life quality, and realize the social value in the long run.

1.2 Literature review

Cen proposed that consumers’ behavior perform as increased initiative, personalized consumption, attention to value and information, the pursuit of brand, and enhanced online shopping trends [1]. And
there exist some problems related to marketing strategies catering to the above characteristic, such as ignorance of personalized needs of consumers, single price strategy, inadequate consideration of consumer convenience, and lack of brand personalization. In order to solve these problems, marketing strategies are suggested to consider those overlooked factors to make some improvements. Huang proposed that domestic and foreign researches on the consumption behavior of green agricultural products mainly focus on Demographic characteristics, ideology, social status, attitudes, aspirations, markets, and political intervention [2]. With the aim of Promote consumer demand for green and healthy food, the author suggests to strengthen the government’s promotion of green agricultural products, expand the scale of production enterprises and adopt new marketing strategies, encourage the media to give more positive publicity to form consumer identity and guide consumers to establish a correct concept of consumption. Wu analyzed that online sales have a significant impact on consumer behavior today. Online consumers are used to doing some shopping anytime and anywhere, and they prefer to consume through mobile clients [3]. What’s more, she also pointed out that the consumers are inclined to pick up goods regarding the publicity on social media, product quality, and consumption experience. Therefore, the writer concluded that marketing strategies are supposed to subdivide online shopping groups to effectively carry out corporate positioning, layout mobile e-commerce to satisfy the needs of immediate consumption, enhance quality grade management to meet the requirements of consumption upgrading, make full use of social media to boost corporate reputation, and create a perfect shopping experience for consumers. Ding analyzed that small and medium food enterprises products of successful marketing methods mainly include professional market research, clearly defined the core of enterprise products consumer groups, accurate brand positioning, recognizable brand name and logo design, first to the enterprise product marketing standards for leaders, classic slogan, product packaging design, brand strategy guidance in product sales terminal brand building and promotion products sales volume, successful investment promotion planning for new products through professional media, sales management and sales team training system for small and medium-sized food enterprises[4]. Liang found that there are some problems in brand marketing of food industry in China, such as homogenization of marketing model, imprecise positioning of food brand, insufficient marketing innovation and excessive publicity. At the same time, there are still some problems in e-commerce marketing, such as low entry threshold, difficult consumer rights protection, information asymmetry and hard food safety management. Liang considered that the food e-commerce marketing model should be optimized by enriching the inside information and connotation of food brands, strengthening the supervision of food e-commerce platform marketing, and improving the relevant laws and regulations in the field of food e-commerce marketing [5].

There are several gaps in research, with the problems starting with a wide-open literature review that does not pinpoint the focus of the study. Most scholars introduce too many ideas but fail to maintain the level of information needed to address market strategy optimization of healthy food based on analysis of consumer behavior characteristics. Choosing between healthy food optimization and consumer behavior analysis would provide a basis for the research with sufficient details to enhance sustainability. The first section of the research talks about healthy foods in general, which multiple scholars failed to mention optimization strategy at all [6]. It is doubtful that the researchers wanted to leave these questions unanswered, yet they provide crucial answers to sustain consumer behavior characteristics. One area mentioned severally by researchers is how to promote healthy eating and a healthy lifestyle. Missing from these researches was concrete evidence of how the researchers examine consumer behavior characteristics and factors informing them to change their consumption habits of healthy foods. The area of consumer behavior characteristics is essential and could be a study on its own.

Another research gap involves the incompatibility of variables in studying healthy food and consumer behavior characteristic. Healthy food is a household condition, while consumer behavior is an individual condition, with the former measured at single points while the latter measured across periods. The central question arising from the above situation is how healthy food programs should be reformed to improve efficiency in consumer behavior. Should more thoughts be given to consumer behavior characteristics or the need to consume healthy food? The answers to this question are
forthcoming, yet many researchers ignored this point. This question implies that many studies were full of ambiguities and neglected the value of economic considerations in shaping consumer behavior towards healthy food consumption.[7] Overall, various scholars talked about one subject and ignored the optimization of healthy food based on consumer behavior (Starke & Trattner, 2021; Kim et al., 2018) [8]. This implies that the researchers leave too many unanswered questions and wide gaps in the literature review to offer meaningful information to support the need for this study to analyze consumer behavior characteristics.

1.3 Research framework

We use the questionnaire method to obtain first-hand data: we ask questions about several dimensions of consumer behavior analysis, such as thematic differences, group effects, consumer psychology. Numerical assumptions are then made for different answers to each question. The collected questionnaire results are used as analysis data. The multiple linear regression method will be used to find the main characteristics of consumer behavior of healthy food (take Mint health Company as an example). Finally, we analyze the character portrait, clarify the characteristics of the specific target market, and propose our optimized marketing method according to the corresponding characteristics.

2. Methods

In order to carry out our research, we mainly obtain data through a questionnaire survey. We then use a multiple linear regression model to analyze the data and get the final results.

2.1 STEP1: use the questionnaire survey method to obtain first-hand data

We choose to pick up Mint Health APP as an example to investigate healthy food. This paper uses the questionnaire survey method to obtain first-hand data for its quality of authenticity and intuition.

First of all, the basic information of healthy food consumers will be investigated from three perspectives of consumer behavior analysis[9]: In terms of subject differences, we plan to investigate the gender, age, occupation, and monthly disposable amount of different consumers, and build consumer portraits based on this, so that we can have a general understanding of the target group of marketing; In terms of group effect, we plan to investigate consumers' understanding of healthy food, purchase frequency and purchase reason for Mint Health brand. In terms of consumer psychology, we want to explore consumers' tendency to consume healthy food and their expected ideal price and dig deeply into their personal preferences.

Apart from collecting users' basic information, we also developed some questions to investigate users' personal preferences for healthy food. In common research, the nutrition and security of the food is always taken into consideration. Therefore, we set questions to inspect how much attention people pay to nutrition balance and security of healthy food. Also, we know that the reason people choose healthy food is likely to be to keep fit and lose weight. Therefore, we add the inclination of calorie and satiety into the questionnaire. Except for the above attributes of healthy food, taste, price, and packaging are significant variables for marketing. To optimize the current marketing strategy, we also introduce related questions into the questionnaire. And finally, users’ satisfaction with Mint Health APP would provide an intuitive display of user experience. Therefore, the satisfaction score to Mint Health APP is also set in the questionnaire.

2.2 STEP2: construct multiple linear regression model

When we had finished the collecting step, we turned to analyze the data. According to the questionnaire results, we make numerical assumptions on different options for different questions, converting the text answers to data samples. Then we choose satisfaction to be the dependent variable and select 7 independent variables: balanced nutrition, calories, security, flavor, price, satiety, packaging. At last, we set the values of 'whether the consumers have used the Mint Health APP or not'
to be the dummy variable, building up a multiple regression model with Minitab to determine the significant factors.

3. Result

3.1 Development status of light food industry

As for the background of healthy food, we know that with the development of the economics, people have more requirements for the food. Not only for solving the hunger problems but also for eating healthier. Some people who want to lose weight or keep fit will choose foods with lower calories and sugar. In order to meet the requirements of the consumers. Many companies make different kinds of healthy foods for the consumer to choose. In terms of the currently popular form of light eating, light eating does not refer to a particular type of food, but a concept of food, including four keywords: taste, price, satiety, packaging.

- Taste: As a basic attribute of food, its taste is an important reference to judge its quality, which largely determines the popularity of food.
- Price: Price is an important reference for food selection, and an appropriate price is conducive to the sales of dishes.
- Satiety: Satiety is the most basic factor for people to buy food. While ensuring their health, satiety can bring people great satisfaction after eating.
- Packaging: Exquisite packaging and design can improve the delicacy of dishes. With the continuous improvement of life quality, people pay more and more attention to the sense of ritual. Good packaging will bring significant benefits.

That said, healthy eating is not the same as a salad, it's not the same as a diet meal, it doesn't have to be raw and cold vegetables. Light eating is not a diet, but a general diet that is lower in calories, more filling, more balanced, and takes less time to complete a meal.

While we open the apps for light foods, we see that the western dishes accounted for the most. And in China, many companies also offer some Chinese-style light foods.

3.2 Analysis of consumer behavior characteristic

We have said that we set up a questionnaire to get the specific consumers' behaviors. We first made a rough analysis based on the questionnaire. In the 473 samples we investigated, we can see that 47.25% of the customers were male and 52.75% were female, and most people who eat light food are between 21 and 30 years old, accounting for about 42%, and most of them are workers, and the amount they can control is between 2000 and 4000 yuan per month. Most people prefer take-out to light food, and they think the price of light food should be between 20 and 35 yuan. For example, our questionnaire also asked the frequency of using the mint Health software. Finally, we investigated the concerns about the selection of light food. Among the 473 samples we investigated, we paid the most attention to the safety of light food, followed by the balance of the flavor of light food.

3.3 Characteristics of consumer behavior

In the two parts above, we have analyzed the demographics and the consumer’s portrait, and the concept is also outlined. In this section, we will further analyze the behavior characteristics of consumers using Mint health. The app is well known for its functions to track meals and calories and being a platform to shop for light-eating products. Of the 472 questionnaires we collected, 343 respondents have used Mint health.

Our questionnaire shows that the main reason for users to buy light food through this application is their own need to stay healthy and keep fit. On this basis, 71.35% of them believe that the food they buy through this professional platform is green and healthy. Meanwhile, the fair price also contributes to the purchase. On the contrary, people who don't use the app to buy snacks are mostly uninterested and don't demand.
Of the users who buy the light food through the app, 77.55% pay close attention to the taste of the products, accounting for the highest proportion, which indicates that even having light meals, they prefer to have delicious ones. And the safety of the products has been taken into consideration by 244 respondents. In addition, 70.07% of them care about the price; that is to say, there are many price-sensitive users.

Most users started using the app with its diet-management features, such as calorie logging, and gradually converted to buying healthy food on the platform. From the specific behavior analysis above, it can be concluded that consumers have the following characteristics when using the app. Firstly, they generally record their calorie intake of each meal and have a strong motivation to lose weight healthily, and they consider having some light, and healthy food can help. Secondly, they are usually price-sensitive users, whose purchase behaviors are most affected by the price fluctuations. Lastly, they seek "delicious" light food as much as possible, which means they are unwilling to sacrifice the taste for healthier foods with less oil and sugar.

3.4 Marketing Strategy Problem

According to our investigation and research, it’s obvious that the internet traffic conversion and realization of the app is quite challenging. For example, among 472 respondents in the questionnaire, only 192 have ever used this app to buy the related products, accounting for about 40.68%.

What mainly leads to this phenomenon is that the present position of Mint health belongs to a tool-type application rather than a social platform, users close the app right after using it, which accounts for the short residence time. And social sharing functions are not emphasized in marketing, and many users cannot have positive interactions or feedback by sharing their experiences with others. Therefore, the low conversion rate can be easily comprehended.

It is worth mentioning that many consumers are sensitive to the price, which means the lower the price, the higher the purchased quantity. But many senior users care less about the cost. In terms of marketing strategy, the target customers are not effectively selected and reflected. It is clear to see the flaws in the segmentation of the customers with different demands and purchasing power. Define a more distinct focus group becomes a prior issue for marketing.

As mentioned above, consumers have various needs when using this app. Therefore, providing customized dietary and sleep management plans for customers has become a very important problem. Once accurate customization can be made, and if it works out well, then the realization and utilization rate of customers will be greatly improved.

Mint health has a special channel whose major function is creating professional and original content about health, attracting viewers to subscribe and potential consumers. So, marketing plays a significant role in translating the followers into consumers for real. Customers prefer to follow key-opinion leaders expressing their diet, lifestyles and so on. Therefore, their recommendations can be very convincing to the followers.

4. Discussion

4.1 Data analysis

Price, taste, security, and packaging often influence the sales of a food product. And for healthy food, we need to pay attention to extra aspects such as nutrition, calories, and satiety. Therefore, we come up with 7 independent variables that we have to include in our questionnaire. We chose the respondents’ satisfaction with the Mint Health APP as the independent variable, and for the people who have not used the Mint Health APP, we set the corresponding satisfaction to zero. Thus, we have to add an independent variable that represents whether people have used the Mint Health APP to distinguish between people’s satisfaction.

Through the above analysis, we select appropriate independent variables and dependent variables in Minitab software and set the confidence interval as 90% for fitting through stepwise analysis.

For the dependent variable satisfaction, if the value is 0, the respondent has not used the mint health APP. If the value is not 0, the respondent has used the software, and the value from integer 1 to 5
respectively represents the degree of dissatisfaction to satisfaction. The higher the value is, the more satisfied the respondent is. For nutrition, calories, security, taste, price, satiety, and packaging, their values are distributed as integers from 1 to 5. The higher the value is, the more the respondents attach importance to the variable. For the independent variable use, if the user has not used the mint Health APP, the value is 0; if the user has used the mint Health APP, the value is 1. The results we analyzed in Minitab software are shown in Table 1.

Table 1. Result of the regression analysis

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<th>Regression Equation</th>
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<td>satisfaction = 1.614 + 0.0911taste + 0.1105price + 0.1375satiety + 0.1142packaging + 3.4882use</td>
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<th>Coefficients</th>
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From the above result, we know that the adjusted R-square is 79.17%, which is larger than 50%. And it represents that the adjusted R-square is a relatively good number. That is to say, the result of the regression analysis can be accepted.

4.2 Strategies

From the regression equation, it can be seen that in the presence of other variables, five variables affect the customer satisfaction of Mint Health APP: whether the customer has used the APP, the taste, price, satiety, and packaging appearance of healthy food. Among the above significant factors, the use of Mint Health APP, whose coefficient is 3.4882, has the most significant impact on satisfaction. In order to have a solid consumer group, the first step is to let the software and products into consumers’ real lives. This can be improved by enhancing the practicability of APP. For example, add a social sharing module in the Mint Health APP, which will give users more opportunities to interact with each other on the platform. Consumers’ real shopping experience is more credible than almost any advertisement. Thus, a sharing module will attract heat and flow for health products more effectively. Based on strengthening the sense of scene and functionality, consumers can lengthen the use time of the Mint Health APP so that people are more likely to be attracted by the advertising of products, that is, to let marketing tools enter the consumers’ visions and lives. When marketing strategies approach consumers’ lives, the second key point is to make those strategies work. This paper will put forward suggestions from four aspects: taste, price, satiety, and packaging.
(1) **Taste of healthy food**

As a healthy food, to win the consumer market, it is essential first to grasp the taste needs of consumers. Most healthy foods advocate less oil, less salt, and less addition, and retain the original taste of food to achieve healthy purposes. Without the presence of condiments, many foods will be unpleasant. In addition, many consumers who choose healthy foods are likely to be depressed about losing weight. Good taste can make the product stand out among many competitors and quickly and firmly attract consumers. In order to achieve this, enterprises can conduct market research on consumers, clarify their mainstream taste preferences, increase the production and publicity of the taste, and add advertisements emphasizing “good taste” to attract consumers to try. At the same time, before new products are listed, enterprises can also carry out offline trial activities near schools and workplaces to collect suggestions and favorite products as key sales objects in the future.

(2) **Price of healthy food**

With the concept of healthy life gradually gaining popularity, healthy food has increasingly become people’s daily diet. Excessive prices can be a burden on consumers, thus shifting target customers to other alternatives. Therefore, it is suggested that healthy food enterprises should consider the actual situation of consumers as much as possible while pursuing profits. In this market survey, the price of 35 yuan and below is more appropriate. In addition, it is also necessary to carry out discounted preferential activities from time to time and issue coupons to consumers, such as buy two and give one, reducing 10 at full 100, and so on. It is necessary to increase publicity to attract more consumers to make large purchases and achieve thin profit and more sales in the marketing process. Furthermore, users’ consumption levels and habits can be investigated when users register APP for the first time. Different target user groups can be divided at the beginning, and hierarchical operation can be carried out according to different price demands to recommend products that are more in line with consumers’ shopping tendencies.

(3) **Satiety of healthy food**

As mentioned above, many consumers purchase healthy foods to lose weight, which is in the stage of diet control. The opportunity to eat is very rare for such people. Moreover, long-term satiety can help people avoid eating other things and promote the effect of weight loss. When consumers gain on the difficult way to lose weight, they will also rely more on the products to establish a more stable long-term relationship with the enterprises. Therefore, satiety should also appear on the posters and texts of the advertisements. At the same time, ensuring the health and nutritional balance under reducing food intake is a key problem for people on a diet. Mint Health APP can add an exclusive nutritionist function to provide consumers with a one-to-one healthy life plan by developing a reasonable diet plan according to the user’s gender, age, goals, and periodic healthy food packages. Customized packages can meet the needs of consumers to the greatest extent, increasing user stickiness and combine and sell healthy food of the company to promote sales and profits.

(4) **Packaging of healthy food**

For food products, packaging appearance is very easy to ignore. Packaging is the first impression of healthy food to consumers. Research shows that emotional color in food packaging design will affect people’s purchase desire and mood [10]. Therefore, when packaging food, enterprises should reasonably choose colors and design pictures to meet target consumers' needs and stimulate their purchasing desire. For example, to stimulate people’s desire to eat healthy food and keep fit, an animated figure with a healthy body can be added to the packaging. Enterprise can also draw attractive color pictures of healthy food to attract consumers to buy and taste.

4.3 **Other implication for promoting healthy food**

In addition to the strategies mentioned above and corresponding measures to ensure the strategy's implementation, other aspects can help promote the sales of healthy food. For example, we can pay attention to the accumulation of private domain flow and transformation. Mint Health APP should add a dedicated dietitian through the enterprise WeChat and provide one-to-one healthy living plans to achieve customization, such as diet and sleep management plans. We can also convert the Mint Health mini-program into registered users of the APP. For example, we can issue various kinds of individual
coupons to users who download Mint Health APP. The above method can screen out target users initially and carry out the stratified operation according to different purchasing needs. Moreover, we can also adhere to the mode of KOL sharing through the construction of the Mint Health channel and the transformation of live broadcasting. The sharing content can include but is not limited to healthy recipes, health preservation skills, and user experience cases. This continuous sharing can increase the popularity of the Mint Health APP and provide users with a full range of food choices, saving users trouble.

5. Conclusion

Based on consumer behavior characteristics, this paper obtains 473 first-hand data through the questionnaire survey and finds that the proportion of male and female consumers in healthy food (taking Mint Health as an example) is close to one. Most consumers are young people aged 21 – 30, and their monthly disposable income is 2000 – 4000 yuan. After using multiple linear regression analysis, it is found that the variables affecting the satisfaction of Mint Health are APP usage, taste, price, satiety, and packaging. Mint Health company should attract more consumers to use their APP and buy their products by strengthening the practicability of APP. Meanwhile, it is of significance for Mint Health and other health food companies to strengthen the marketing of taste and other three aspects to promote sales and obtain more profits.

This paper solves the existing problems in the current Mint health APP marketing strategy and gives targeted suggestions, which can help improve Mint health APP mall sales. These strategies and suggestions can point out the direction for the future development of the Mint Health APP. Similar companies selling healthy food can also learn from the survey research and strategy suggestions to solve their problems and achieve better development. These suggestions provide users with more targeted services, provide specific implementation measures to solve the issues raised by users, and provide a way of investigation for similar industries.

There are still some inadequacies in our investigation. For example, the sample size we selected in the questionnaire was 473. But the conclusion is not very good as we expected before. We assumed that the sample size was too small. Another limitation of our survey is our methodology. Some behavioral characteristics of consumers can't be quantified. For example, the way some people choose to buy light foods may be diverse. They are not fixated on a particular way of buying. So, there's going to be some impact on our data.

Besides the change of dietary means, the consumer also notices the allocation of a proportion of meal nutrition. According to the World Health Organization, one in three people is overweight, and the prevalence of diabetes continues to climb. Because of this, the world set off a wave of sugar reduction. In recent years, alternative ingredients have been the subject of much discussion. In addition to the much-hyped artificial meat, another promising prospect is plant-based milk. In addition to environmental concerns, vegan diets and lactose intolerance are also contributing to the trend. According to the National Institutes of Health, about 65 percent of the world's population lacks the physiological mechanism for digesting lactose, particularly common in East Asia. Under such circumstances, plant milk has become the solution to meet market demand.

References


