

## Research Article

### Analysis on the Impact Factors of Consumers' Purchase Intention of Sports Food

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**Abstract:** Along with the development of the modern society, the people's request to the life quantity is also higher and higher and sports have gradually become a trend. An increasing number of people participate in physical exercise and then the demand of sports food is also growing. Based on the survey of the consumers, this study employs the binary Logistics regression method to analyze the factors that influence consumers' purchase intention and make recommendations accordingly from both producers and consumers. The research has important practical significance for sports food production enterprises to develop the market and for consumers to choose sports food.

**Keywords:** Impact factors, purchase intention, sports food

#### INTRODUCTION

Sports food was originally designed for professional athletes in China to meet the needs to improve athletic performance. In recent years, with the social development and economic progress, people's consumption patterns and consumption structure has changed dramatically and gradually shifts from the pursuit of three meal satisfied in the past to the pursuit of the simultaneous development of physical and mental health. Coupled with the country's national sport advocacy, physical activity has been vigorously promoted, gym and stadium become a good place for recreation. In this context, sports nutrition has gone into the public feeling and sports food has developed rapidly. Meanwhile, the consumer group of sports food has changed dramatically from the previous professional athletes market to the present "mass market". Sports food purchasing has become a hot discussion.

Analyzing consumers' willingness to purchase sports food not only helps manufacturers to understand customer needs and take corresponding measures to accelerate the pace of sports food marketing, but also is conducive for consumers to understand the existent problems of purchasing sports food by themselves to make a reasonable choice. In this study, it explores the impact factors of consumers' purchase intention of sports food and makes recommendations accordingly based on the practical investigation.

#### MATERIALS AND METHODS

**Consumers' purchase intention:** Intention is a particular way to determine the behavior and consumers' purchase intention is the probability level

of consumers buying a certain brand of product and an important indicator to assess the customer buying behavior (Dodds *et al.*, 1991).

The study found that consumer purchase intention will be affected by many factors. Consumers will first choose goods that best suit their desires, therefore the properties of the product itself are the most important leading factors of consumer buying behavior (Babin and Darden, 1995). Howard and Sheth (1969) believes that consumers awareness of the product or brand will affect their willingness to purchase the product, thereby affecting the purchase decision. Mohr and Webb (2005) hold that corporate social responsibility will affect the consumer's intention to buy the enterprise product, the higher the corporate social responsibility is and the more social responsibility activities are made; the intenser the customers purchase intention of their product is. A study made by Søndergaard shows that consumer attitudes play a preconceptive role in the purchase and affect consumers' purchasing decisions to a great extent (Søndergaard *et al.*, 2005).

In addition, consumers' personality characteristics, consumer context, socioeconomic status, product evaluation, product safety and other factors also will have an impact on consumers' purchase intention.

**Sports food:** The concept of sports food is gradually formed in its continuous production and the process of development in the industry. According to General Standard for Sports Nutrition Food GB/ T24154-2009, sports nutrition food is defined as the food to supply nutrients or meet the special needs of the body movement.

Based on different demand cases of the body's energy and nutrients, sports food can be divided into the following categories according to their functions:

Table 1: The variable definition of personal characteristics

Variable names	Variable definition and acquisition
Gender	Male = 0, female = 1
Age	Aged 25 and under = 1, 26~35 = 2, 36~45 = 3, aged 46 and above = 4
Education	High school education or below = 1, undergraduate or junior college = 2, master or above = 3, master or above = 4
Average monthly income	RMB2000 and below = 1, RMB 2000-4000 = 2, RMB 4000-8000 = 3, 8000 and above = 4

Table 2: The statistical results of consumers' personal characteristics

	Variable	Frequency	(%)		Variable	Frequency	(%)
Gender	Female	155	56.4	Education	High school or below	89	32.3
	Male	120	43.6		Undergraduate or junior college	139	50.6
Age	Aged 25 and under	45	16.4	Average monthly Income	Master or above	47	17.1
	26-35	74	27.0		RMB 2000 and below	35	12.7
	36-45	112	40.6		RMB 2000-4000	75	27.3
	Aged 46 and above	44	16.0		RMB 4000-8000	86	31.3
				RMB 8000 and above	79	28.7	

- **Energy supplements (Kelly et al., 2010):** The main ingredient is generally carbohydrates which can quickly provide the necessary energy for body movement.
- **Protein supplements:** High-quality protein or amino acids can promote the balance protein metabolism in the body and repair body tissue.
- **Energy-controlled food:** That food represented by carnitine food can change the physical exercise capacity by changing the body's metabolism. In addition to the above three, there are other sports foods, such as vitamin supplements and complex nutrients.

The difference between sports food and other food is that the former provides the energy necessary for the body according to the needs of sports groups (McArdle et al., 2010). There are big differences in the configuration of its nutrients from that of ordinary food. Sports food primarily provides desired protein, carbohydrates, amino acids and the like after the body movement. Therefore, ordinary food cannot be used as a substitute for the sports food.

**Research object:** In this study, the data sources of Changsha local sports food market are collected by the questionnaire survey. In Better-Life Mall, Wal-Mart, A Best Supermarket and other large shopping malls, stores, small supermarkets, consumers were randomly selected and filled in questionnaires on the spot.

**Research method:** This study employs the binary Logistics regression method to analyze the factors that influence consumers' purchase intention. Y represents consumer purchase intention and depends on the binomial distribution. If consumers have purchase intention, it will be represented as "1", if not, as "0".

Y, the consumers' purchase intention of sports food, is a dependent variable, the consumers' personal characteristics, behavioral characteristics as well as

product features also are dependent variables. Among them, the personal characteristics of consumers are represented with four factors: gender, age, education level and the average monthly income; the behavioral characteristics of consumers include their emphasis on the brand, packaging and taste; product features are reflected in product price, purchase place and product composition. The variable definition of consumers' personal characteristics is shown in Table 1.

In this study, for consumers' behavioral characteristics and product features, 1 represents "very important", 2 is "important", 3 represents "neutral" and 4 is "unimportant".

**The data description of consumer panel:** In this study, a total of 300 questionnaires were distributed and 281 were returned among which 275 were valid, with the effective returning rate of 91.67%. The statistical results of those 275 consumers are shown in the Table 2.

As can be seen from the above Table 3 and 4, the proportion of male respondents is slightly larger than that of females; people aged 26-45 years old are in the majority and about half of them have accepted undergraduate education. Besides, the number of people with 4000-8000 monthly income is the most. Among them, the majority of consumers think that the brand, flavor and prices of the sports food are relatively important while the purchase place and composition of the food are not.

## RESULTS AND DISCUSSION

**Statistic analysis of the data:** Next, this study uses SPSS 17.0 software for statistical data analysis. By KMO test and Bartlett sphericity measure, the model conforms to the measurement criteria and can be further analyzed. The data analysis results are shown in the Table 5.

As can be seen from Table 5, the significance level p-value of consumers' age and education, purchase

Table 3: The statistical results of consumers' behavior characteristics

	Variable	Frequency	(%)		Variable	Frequency	(%)
Emphasis on the brand	Very important	80	29.1	Emphasis on the taste	Very important	152	55.3
	Important	132	48.0		Important	84	30.5
	Neutral	35	12.7		Neutral	20	7.3
	Unimportant	28	10.2		Unimportant	19	6.9
Emphasis on the packaging	Very important	36	13.1				
	Important	91	33.1				
	Neutral	71	25.8				
	Unimportant	77	28.0				

Table 4: The statistical results of product features

	Variable	Frequency	(%)		Variable	Frequency	(%)
Product price	Very important	81	29.5	Purchase place	Very important	69	25.1
	Important	119	43.3		Important	58	21.1
	Neutral	45	16.3		Neutral	59	21.5
	Unimportant	30	10.9		Unimportant	89	32.3
Product composition	Very important	37	13.5				
	Important	80	29.1				
	Neutral	85	30.9				
	Unimportant	73	26.5				

Table 5: Model estimation and results

Variable	B	S.E.	Wald	Sig.	Exp (B)
Gender	-0.692	0.311	9.427	0.001***	2.315
Age	0.215	0.176	1.368	0.324	1.202
Education	0.149	0.153	0.792	0.391	1.150
Average monthly income	0.452	0.091	28.492	0.000***	1.639
Emphasis on the brand	0.604	0.147	19.836	0.000***	1.826
Emphasis on the packaging	0.416	0.128	8.935	0.002**	0.539
Emphasis on the taste	0.715	0.205	16.721	0.000***	2.386
Product price	-0.421	0.138	10.825	0.002**	0.642
Purchase place	0.171	0.149	1.472	0.382	1.425
Product composition	0.078	0.149	0.430	0.619	1.125
-2 log likelihood	301.876				
Nagelkerke R <sup>2</sup>	0.319				
Hosmer-lemeshow chi-squared statistic	20.865				

\*\*\* and \*\*: Significance in the 1 and 5% of the statistical level; S.E.: Standard error

place and composition of sports food are 0.324, 0.391, 0.382 and 0.691, respectively. Therefore, it can be inferred that these four variables are not significant, in other words, consumers' age and education, purchase place and composition of sports food have no significant effect on their purchase intention of sports food. According to the research, there are positive effects between consumers' average monthly income, their emphasis on the brand, packaging and taste and their purchase intention, while consumers' gender and the food prices have influenced on their purchase intention negatively:

- Consumers' gender has a very significant negative impact on their purchase intention of sports food. Male consumers are more willing to buy sports food and play a dominant position in the consumer market. This is because men are the main crowd in basketball, football and other sports and dominate the physical exercise. And in general, men prefer sports than women. In addition, there are also differences between men and women on their consumer attitudes, men tend to consume more on sports foods.
- The average monthly income of consumers has a very significant positive impact on their

willingness to buy. The higher the average monthly income of consumers is, the more they are prone to buy. It depends on the characteristics of sports food which is not necessities of life. Their buying behavior is to improve the quality of life.

- Consumers' emphasis on brand has a very significant positive impact on their purchase intention. Consumers are more willing to accept sports food with a higher popularity and stronger market influence. Advertising and media publicity will have a significant impact on consumers.
- Consumers' emphasis on packaging also has a significant positive impact on their purchase intention, which is consistent with the normal consumption psychology of consumers. Sports foods with more upscale packaging will more easily convince consumers to buy.
- Consumers' emphasis on taste has a very significant positive impact on their willingness to buy. Sports food with good taste would better suit consumers' needs. Manufacturers will produce in different formulations to meet the different tastes of different customers.
- Product prices have a significant negative impact on consumers' purchase intention. A higher price

will decrease the purchase intention. Another reason is that sports food is not a necessity of life and high prices will reduce consumer buying enthusiasm.

## CONCLUSION

Through the above analysis, we found the factors that influence consumers' purchase intention. On this basis, this study proposes some countermeasures and suggestions below for manufacturers and consumers.

**Manufacturing enterprise marketing strategy:** To further explore the sports food market, enterprises should focus on the customer situation and take appropriate measures.

**Fractionize the target consumers and develop sports food according to the different demands of consumers:** There are significant differences in food choices among consumers with different gender, average monthly income and tastes in sports food. A single route will be unable to adapt to market development and it is difficult to seize the different levels of consumers. Therefore, in the product development stage, it should be noted.

First, developing different levels of sports food with different prices, not only meets the market demand for high-spending customer groups, but also can attract consumer groups with low consumption levels to dominate the consumer markets.

Second, developing specially the sports food for female consumers and emphasizing the differences from ordinary food to meet the needs of the female customer groups and expand the market.

Finally, dividing detailedly product classification and adding a variety of flavors to increase the selectivity of consumers as well as maximizing taste cater the needs of different consumer groups.

**Increase the attractiveness of the packaging and step up publicity efforts to create a good brand image:** In terms of consumer preference for packaging, a more detailed specific survey should be made to understand consumer preferences in colors, shapes, pattern of sports food packaging and to better adjust to the existing package.

As for consumer preference for the brand, on the one hand, enterprises continue to employ the traditional means of propaganda, such as television advertising, brochures, supermarket promotions, etc.; on the other hand, enterprises can use WeChat, microblog and other emerging communication channels. The multi-pronged approach can improve familiarity and popularity among consumers and create a good brand image at the same time.

**Notes for consumers to purchase sports food:** According to researches, consumers pay little attention on the purchase place of sports food and its ingredients. In view of this situation, the following recommendations are proposed.

**Select the purchase place reasonably to ensure product quality:** Nowadays, the sports food market lacks standard guidance notions and various good and bad brands are flooding the market. Consumers had better buy in formal supermarkets or stores, such as Wal-Mart, Better-Life Mall, A Best Supermarket etc., which both have a variety of products to choose, but also can ensure product reliability.

**Understand ingredients of the sports food and make a reasonable choice according to their own needs:** Consumers pay no enough attention on sports food and lack of expertise. So it is difficult for them to make reasonable choice of sports food. The correct choice of sports food, not only can ensure their full advantage, but also help enhance consumers' physical fitness. Therefore, consumers should focus on sports food ingredients, quality as well as functionality and make a reasonable choice according to their needs, such as exercise program, amount and personal body situation.

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