
NUTRITIVE MARKETING WITH SPECIAL DESCRIPTION OF SOCIAL NETWORKS AS A MARKETING TOOL

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Abstract: The reasons that determine the behavior of food product consumers, but also of people in general, is one of the most complex issues in the marketing of companies and require extensive research, and the reason for this is the individuality and complexity of human. Knowing all the influencing factors grouped into determinants and discovering the correlations between them will lead to a wealth of information on the impacts and consumer behavior. Social platforms (networks) on the internet are very popular today, and information on nutrition, diet, gastronomy and eating habits is published on a daily basis. In recent years there has been a growing interest in food, nutrition and diets on social media (Livestiling, Facebook, Instagram, etc.), with gastro-blogs and influencers as channels used in marketing and influencing consumer behavior. The subject of the research in this paper is the theoretical development of a new methodology of the so-called “nutrition marketing”, based on several principles (3P), focused on the importance of nutritional determinants, determinants of food quality and safety, as well as other important determinants that influence consumer behavior. Emphasizing these determinants and the benefits for people's health and well-being are part of the principles of Nutritional Marketing. As one of the concepts of Nutritional Marketing, a survey is included in the research for this paper on the impact of social platforms as a marketing tool on consumer behavior by detecting an impact determinant called social media. The analysis of the survey is supported by the creation of several statistical models, including a correlation analysis model and a model for distribution of patterns. The principles of nutrition marketing and the developed methodology will enable companies to create a successful food marketing strategy. The benefit can be trifold: it will benefit companies insuring their higher profits, will benefit citizens by increasing their consumption of healthy, quality and safe food products, and ultimately, will benefit the country.

Keywords: Nutritional marketing, Nutritionism, nutritional properties, consumer behavior, quality and food safety

1. INTRODUCTION

The best business concept, model, or idea can fail if it is not properly offered to consumers and consumer behavior is not recognized. The use of information systems in modern business is necessary (Bourgeois T.D., 2014), it is also necessary to recognize consumer behavior. Consumer buying behavior, despite its complexity and diversity, can be represented as a system consisting of structural and functional features that can be effectively simulated by dynamic modeling and model creation and, as a result, the nature of human purchasing behavior can be explored, in all its parts, and then analyzed all dynamic behaviors across a range of assumptions and conditions. Success in researching consumer behavior and developing marketing strategies depends on the use of scientific methodologies and concepts and the use of modern technology such as: database management system (DBMS); geographic information system (GIS), (Martinovski S., 2017a), which enables the creation of systematic spatial and analytical models that can describe the present state and project the future; advanced database analysis using data mining methods (Charu C.A., 2015; van der Aalast, 2016), providing a wealth of useful information. Our research shows that there is a growing number of consumers of nutrition-minded foods that are increasingly reflecting on the nutritional properties of food (Martinovski S. et al, 2015; Martinovski S. et al, 2016; Nikolovska Nedelkoska D. et al., 2016). This information is important for companies in the food industry, as different nutritional components (vitamins, minerals and other useful ingredients) and product quality and safety can stimulate purchasing and thus help expand the profile of

brand, its improvement and development, and thus, greater profits. Incorporating Nutritional Marketing into the marketing concepts of companies will allow for the creation of a successful marketing strategy because it will provide information on the impact of the determinants - nutritional components (vitamins, minerals and other components important to the human body) on consumer behavior. The ways to highlight the health benefits gained by consuming the product (nutritional quality) and how to report it are part of the principles of Nutritional Marketing. Social media is also included on the internet as a marketing tool, as information on nutrition, diet, gastronomy and eating habits are being pulsed daily.

2. NUTRITIVE MARKETING

Nutritional marketing as a novelty in marketing theory is an innovation based on a large number of studies, a theory that should be applied in the marketing strategies of companies in the field of food industry. Nutritional marketing analyzes the impact of nutritional properties of foods on consumer behavior, analyzes the impact of food quality and safety on purchasing decisions, uses concepts to emphasize nutritional properties and other components that affect people's health and well-being. This concept shows how consumers can orient themselves to food products with embedded health benefits that are clearly defined, well designed, desired, affordable, qualitative, safe and delicious. Modern marketing mix is based on several principles, for example 4P (1.Product, 2. Place, 3.Price, 4.Promotion, or 5P - 5.People etc.), (Kotler F. et al, 2017). In comparison, our research on the impact of nutritional properties on consumer behavior has led us to conclude that Nutritional Marketing is based on three other principles, namely: 3N:

1. 1N - Nutritional and other properties
2. 2N - Nutritional Quality and Safety
3. 3N - Nutritional and Other Benefits - Consumer Notice

This concept demonstrates that the goals of the health food industry should not only be financial and commercial. The industry itself should be focused on improving and producing quality and safe food products, and thus improving consumer health, which is both a socially responsible approach.

2.1 1N - NUTRITIVE AND OTHER PROPERTIES

The first principle identifies the nutritional properties of the food as a specific determinant and identifies the nutritional properties by which the product is highlighted. Second, it enables the selection and definition of the most important nutritional properties.

Nutritional Determinant

All elements of the nutritional properties and sensory characteristics that are of interest to consumers and which should be included in the declaration of foodstuff are: energy value, fat and saturated fat, amount of sugars and proteins, organic acids, carbohydrates, vitamins, minerals, fiber, nutritional health claims, sensory characteristics (color, taste, odor, etc.), etc.

Product safety Determinant

Product safety determinant includes: product safety standards, organic food certification, quality certification, etc. As an example of implementing this principle (1N), we will take the honey from bees. The analysis involves selecting and defining the main nutritional properties of over 70 different types of substances contained in honey that are useful to the human body (honey has been researched for the previous Nutrition Marketing researches, Martinovski S. et al, 2017b) as follows: carbohydrates as basic and the most important components of honey; of all the sugars present in honey, the most are monosaccharides - glucose and fructose, known as invert sugar (invert sugars give honey great biological and prophylactic value); honey contains small quantities of organic acids: formic, oxalic, lemon, wine, dairy, apple, pyroglutamine, glucose, valerian, benzoene and some higher fatty acids; honey contains salts and micro and macro elements (tin, sodium, calcium, phosphorus, sulfur, chlorine, magnesium, iron, aluminum, manganese, chromium, zinc, lead, cadmium, titanium, etc.); honey contains 18 types of amino acids: lysine, histidine, arginine, asparagic acid, threonine, serine, glutamic acid, proline, glycine, cystine, valine, methionine, isoleucine, leucine, tyrosine, phenyl; honey contains numerous enzymes: invertase, diastase, catalase, acid phosphatase, glucose-octase, polyphenoxidase, peroxidase, esterase and proteolytic enzymes; invertase, diastase, catalase, acid phosphatase, glucose-octase, polyphenoxidase, peroxidase, esterase and proteolytic enzymes; honey contains the following vitamins: A, B, B2, B3, B5, B6, B7, B9, C, E, K.

Defining nutritional determinant and product safety determinant is an important element in declaring a product as quality and safe food and will certainly affect consumer behavior.

2.2 2N - NUTRITIVE QUALITY AND SAFETY

The second principle allows for highlighting health facts and informing consumers about health benefits. Indirectly, this will contribute to maintaining the existing quality and/or finding new ways to improve the quality of the food. As an example of implementation, honey is again taken. First of all, it should be noted that of all the animal food

used by humans in their diet, honey has a nutritional and medicinal value thanks to its harmonious relationship between its various nutritional properties. Secondly, it should be noted that honey has a great nutritional quality.

Emphasizing nutritional quality and safety is a key element that can influence consumer behavior, or perception of quality and safe food.

2.3 3N - NUTRITIVE BENEFITS - CONSUMER NOTICE

The third principle allows determining the ways of reporting to the consumer to know the nutritional and other benefits before purchasing a food product. Proper packaging is important, but even more important is the declaration where the nutritional properties will be clearly defined and explained with enough information how much the product can offer, which will influence consumers in purchasing the product. It is also important to create attitudes about higher product value and post-purchase behavior that will help consumers re-purchase the product. This principle of Nutritional Marketing also covers research on how to inform consumers about the nutritional benefits as a marketing tool. One way of informing consumers is the mass media using mass media techniques such as advertising and propaganda. Another way is through educational programs of educational institutions. But as a third way social media is increasingly used (Livestiling, Facebook, Instagram, blogs, forums, gastro blogs and influencers as channels used in marketing) because today they have a great impact and they are used as marketing tools and through them it is marketed information on nutrition, diet, gastronomy and eating habits.

2.3.1 SOCIAL NETWORKS AS A MARKETING TOOL IN NUTRITIONAL MARKETING

If we understand the Internet as a global revolution, then social media (platforms, networks) is a revolution within the Internet. Social media as the most popular tool on the internet platform refer to activities that integrate technology, telecommunications and social interpersonal relationships. They are characterized by easy availability, relative ease of publishing information and high dissemination. It is the speed, breadth and depth of such communication that make social media so popular. Overview of social media content is a major daily routine activity especially for younger people. It is estimated that 90% of young people around the world are actively using social media. In studies of interest to social media, their influence has increasingly been described as a determining factor in adopting any form of human behavior. Popular topics of interest to new generations include lifestyle, food and everything related to it, diet, eating habits, popular diets, healthy foods, unhealthy foods, GMO foods and more. Popular gastro bloggers and food influencers are expected to keep in touch with the audience and constantly post interesting food-related content. Apart from an interesting recipe, it is also important to have a captivating photo, because food first attracts us visually and food is eaten first with “eyes”. Today and in the following period, there is an expansion of gastric creations culminating with the launch of Instagram. Through Instagram and Pinterest, food photography has become an integral part of young people's everyday lives. There are a whole range of facts that confirm that food photos posted on social media further enhance the marketing of food through the media. Textures, colours, symmetry, light and numerous other effects additionally help food marketing to attract the attention of consumers. Kotler, one of the leading marketing experts, lends a great deal of knowledge to social media describing them as a marketing revolution. He points out that social media enabled the consumer not to be a passive consumer but to actively participate in brand building (Kotler F. et al., 2017). Many marketing surveys have shown that over 90% of consumers trust their immediate acquaintances and friends when it comes to purchasing a particular product or service, and as many as 70% of respondents also trust experiences from people they do not know personally. All the rules that characterize traditional marketing are absolutely applicable to social media marketing as well, noting that the speed at which information is disseminated here is much higher. By definition social media marketing is a strategy focused on encouraging potential buyers to exchange information about a product or service voluntarily and free of charge or to like and comment and thereby promote a better position for promotional material. Social media enable more marketing activities such as: word-of-mouth marketing, market research, new product development, brainstorming, promoting relationships with potential customers, all forms of promotion and so on.

But nowadays, social media is increasingly associated with both nutrition and pseudo-nutritionism, and is increasingly being identified as contributing to the development of abnormal eating habits and eating disorders.

Conclusion: The information about food and nutrition that is found on social media can be said to range from completely untrue and unreasonable information to high quality, accurate and scientifically based claims. However, we feel that nutritionism practiced on social media does not enjoy the status it deserves. Social media is flooded with nutrition advice that comes from the "personal experience" of so-called instant experts. Similarly, there are cases of so-called food and nutrition experts who want to convey a nutritional message through their personal experience, but this is done with a lack of theoretical basis and scientific approach, which demonstrates incompetence and incompetence in the field of nutrition. Finally, social media research as a marketing tool shows that the impact of social media on forming attitudes about food, products and nutritional claims is immense.

2.3.2 SURVEY RESEARCH ON THE IMPACT OF SOCIAL MEDIA ON NUTRITIONAL HABITS AND NUTRITIONISM OF YOUNG PEOPLE

To determine the impact of social media on the nutritional habits of the young adult population, a descriptive survey was conducted - a survey of Macedonian young adults. The survey was conducted electronically on 400 targeted respondents, young consumers aged 18 to 35 years. The survey questionnaire contains a total of 16 questions. It is divided into two parts. Demographic questions are listed in the first part (general part) of the questionnaire. The second part of the questionnaire deals with thematic questions related to marketing research in order to see how respondents use social media and what their impact is on their eating habits and nutritionism. A large number of statistical analyzes have been performed, and correlation analysis and distribution of patterns are more significant. For the correlation analysis, a linear correlation model is made by which the correlation coefficient between two and three variables can be calculated (answers to questions). A well-known method of data mining has been used to determine the distribution of patterns. Frequent Pattern Mining / The Apriori Algorithm.

Question 8. When you need (or already have) dietary advice, you should first go to: (1. family doctor, 2. nutritionist 3. via social media (Facebook, Instagram, Online food blog, etc.) , 4. via internet search), 40.18% responded 4. via internet search, 36.16% answered 2. Nutritionist, and 11.83% responded with 1. family doctor and 3. via social media (Facebook , Instagram, Online food blog, etc.).

Question 10. Do you consider the dietary information posted on social media to be reliable? (1.yes, 2.no, 3.partially, 4. do not know), 69.75% answered 3. partially.

Question 11. Do you find Pinterest, Instagram, Facebook and other social platforms to provide nutritionally valuable meals information? (1. yes, 2. no, 3. partially, 4. Don't know), 57.75% answered 3. partially.

Question 12. Are you inspired by food photos uploaded to Instagram and food recipes posted on gastro blogs or Facebook? (1. yes, 2. no, 3. partially), 53.75% answered 1.yes and 29.5% answered 3. partially.

Question 14. I respect gastro bloggers and food influencers (1. yes, 2. no, 3. partially), 43.25% answered 3. partially, and 24% answered 1.yes.

A large number of linear correlations with two and three variables were made, and the obtained results for the correlation coefficient are of small values. The correlation coefficient value between questions 10 and 11 is $r = 0.323$ (relationship is moderate), between questions 10 and 12 is $r = 0.029$ (relationship is very weak), between questions 12 and 14 is $r = 0.243$ (relationship is weak) , between questions 11 and 14 is $r = 0.204$ (relationship is weak) etc. There are several distributions of patterns, and Figure 1 shows the distribution of patterns on questions 10, 11 and 14 with answers to question 10. yes and partially, answers to question 11. yes and partially and answers to question 14. yes, no and partially.

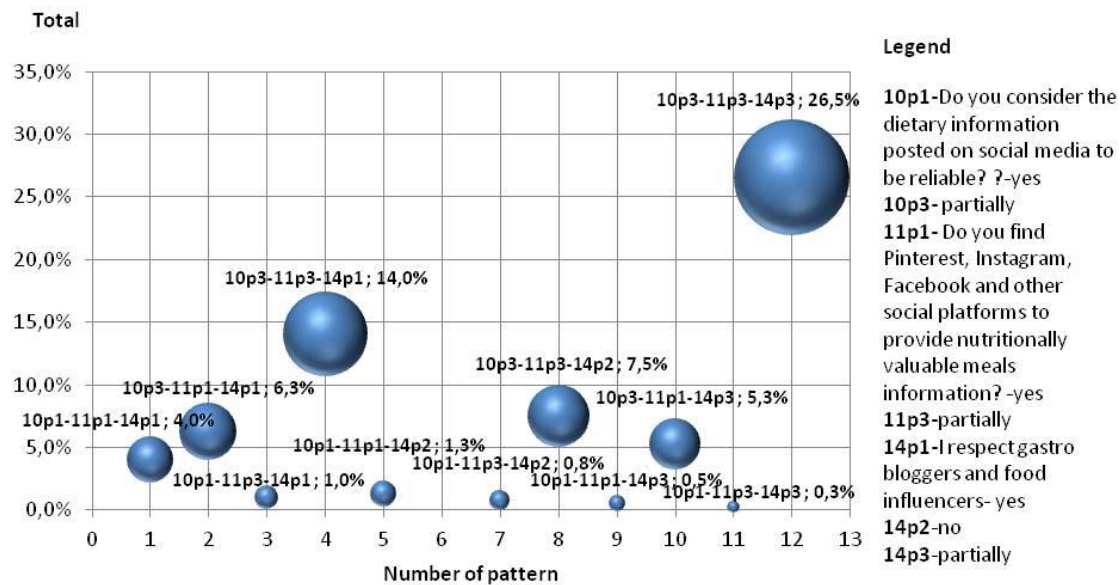


Figure 1. Distribution of questions on questions 10, 11 and 14 with answers to questions 10 and 11 yes and partially and answers to question 14 yes, no and partially

The distribution of patterns in Figure 1 shows that the highest value of 26.5% of the respondents answered partially to the three questions, compared to 4% with three "yes" answers, then the small values of the correlation coefficients and the summarized results, of the survey questions show that the influence of social media and confidence in the information provided about the diet and nutrition of the respondents is partial.

In addition to the positive effects of nutrition marketing, it should be noted that sometimes a marketing campaign confuses the consumer, and there are often cases when a marketing strategy uses health claims or health evoking images to give the consumer an improved picture of the product that these foods are healthier than might be the case (Soo J. et al., 2016). In general, there is a need to deepen knowledge of consumer perceptions across a wide range of different health benefits and claim types. It is often difficult to draw appropriate conclusions on the correct use of marketing tools in the context of the nutritional properties, quality and health benefits of food due to the greatly varying methodologies described in the available publications. Van Buul and Brouns (2015) believe that future research should focus on actual consumer behavior data rather than self-reported preferences in order to ensure reliable and comparable data.

3. CONCLUSION

As a novelty in the work is the so-called Nutritional marketing, based on three principles (3N). The principles are aimed at influencing consumer behavior in the area of nutrition, improving nutrition, emphasizing nutritional properties and the components that influence human well-being and health. Ways to inform consumers about the nutritional benefits of food products are through: the mass media; educational programs of educational institutions; social media that today have a significant impact and are used as marketing tools, which provide information on nutrition, diet, gastronomy and eating habits. Nutritional marketing can be conceptualized as the foundation for providing guidelines for highlighting the nutritional properties of products in order to select better quality and healthier products and thus improve human health. Through the three principles of nutritional marketing, one of the companies' strategies for better positioning of food products on the market is fulfilled. The benefit of using nutritional marketing can be triple: the benefit for companies; benefit for consumers in consuming quality and safe products; and the benefit of the state. Further research can continue to incorporate new determinants that can significantly influence consumer behavior and establish new principles in Nutritional Marketing.

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