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THE MARKETING RESEARCH OF MILITARY SERVICE PEOPLE'S CONSUMER PREFERENCES OF DRY PRODUCT PACKAGES AND WAYS OF THEIR IMPROVEMENT

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Abstract. Basing on the survey of respondents, a marketing research was carried out on military service people's consumer motivations and benefits for the existing dry product package and ways to improve it, as well as on the attitude towards the consumption of instant cereals. The results of the survey showed that military service people were not satisfied with the existing daily field product package; the majority were not comfortable with the sameness of the assortment, cooking time, inconvenient packaging, and lack of individual flatware. It is found that the most important factors for military service people when choosing instant cereals are taste, composition/safety, nutritional and energy value, and the least important are the shape and design of packaging. The analysis of the responses about the nature of the most common negative body changes resulting from the respondents' professional activity indicates that the development of instant cereals on the basis of natural components is promising, as these components can prevent fatigue and certain diseases. 68% of the people interviewed are already comfortable with the inclusion of instant cereals with improved consumer properties into the daily field product package, and other consumers' attitude to them can be significantly improved by explaining to them the benefits of this product. A potential consumer wants to get a product that has a meat and fruit flavor with improved consumer properties, and what is the most important, the product should be tasty, of high quality, and harmless. Military service people will be the main consumers, regardless of their age, occupation, and education. The application of the marketing research on servicemen's consumer preferences made it possible to identify those consumer preferences that must be taken into account when improving the set of dry products and developing new instant cereals in order to meet the potential consumers' demand for these products.

Key words: marketing research, instant cereals, military service people, dry product package, consumer benefits.

МАРКЕТИНГОВІ ДОСЛІДЖЕННЯ СПОЖИВЧИХ УПОДОБАНЬ ВІЙСЬКОВОСЛУЖБОВЦІВ ЩОДО НАБОРУ СУХИХ ПРОДУКТІВ ТА ШЛЯХІВ ЙОГО УДОСКОНАЛЕННЯ

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Анотація. На підставі опитування респондентів проведено маркетингові дослідження споживчих мотивацій та переваг військовослужбовців щодо існуючого набору сухих продуктів та шляхів його удосконалення, а також ставлення до споживання каш миттевого приготування. Результати анкетування показали, що військовослужбовці не задоволені існуючим добовим польовим набором продуктів, більшість не влаштує одноманітність асортименту, час приготування, незручне пакування та відсутність індивідуальних столових приборів. За результатами аналізу анкет опитуваних виявлено, що 68% ставляться позитивно до включення каш миттевого приготування з поліпшеними споживчими властивостями в добовий польовий набір продуктів, а ставлення інших споживачів до них можна істотно поліпшити, роз'яснивши переваги даного продукту. Встановлено, що найважливішими факторами для військовослужбовців при виборі каш миттевого приготування є смак, склад/безпе́чність, харчова та енергетична цінність, найменш важливими – форма та дизайн пакування. Аналіз відповідей респондентів щодо характеру найпоширеніших негативних змін організму внаслідок професійної діяльності вказує, що перспективною є розробка каш миттевого приготування на основі природних компонентів – це запобігатиме проявам втоми та профілактиці деяких хвороб. Потенційний споживач хоче отримати продукт з м'ясним та фруктовим смаком з поліпшеними споживчими властивостями, а найголовніше – продукт повинен бути смачним, якісним та безпечним. Основними споживачами стануть військовослужбовці, незалежно від віку, роду занять та освіти. Застосування маркетингових досліджень споживчих уподобань військовослужбовців дозволило виявити ті споживчі переваги, які необхідно обов'язково врахувати при удосконаленні набору сухих продуктів та розробці нових каш миттевого приготування, щоб забезпечити потребу потенційних споживачів у даних продуктах.

Ключові слова: маркетингові дослідження, каші миттевого приготування, військовослужбовці, набір сухих продуктів, споживчі переваги



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Introduction. Formulation of the problem

For the Armed Forces of Ukraine, supplying military personnel with full and efficient food is extremely

important. Violations in the process of adaptation to the conditions of military service are among the most common causes of young males' weight deficit, lower

productivity, and increased morbidity, which negatively affects the personnel's combat capability [1,2].

At present, it is necessary to modernize soldiers' food rations in accordance with scientifically grounded norms for nutritional, biological, and energy value [3]. One of the main conditions for this is a scientifically grounded study of the specific features of the needs, expectations, and preferences of consumers' target segment to meet their interests to the fullest.

Modern living conditions of military service people, especially in the Anti-Terrorist Operation zone, accompanied by significant physical and mental tensions, constant stressful situations, physical and moral losses, set extremely high requirements to soldiers' physical condition, and reorganize significantly metabolic processes in their organs and systems (muscular, cardiovascular, endocrine, etc.). All this puts a soldier's body to the edge, and sometimes beyond the edge of its functionality. This does not only weaken our soldiers, but often leads to the development of various diseases [4,5].

This situation leads to the increased need in energy and in many nutritional materials for military service people's organisms. That is why we believe that substantial maintenance of soldiers' health condition and combat spirit consists in providing them with rational, adequate nutrition, since today, there is a lot of data proving that food is directly related to the condition of human health, its resistance to the harmful factors of the environment and social setting [6–8].

The significance of military personnel's health for the state's development and security, the importance of soldiers' rational nutrition, adequate for the extreme conditions of their living, and the need for urgent measures to develop and produce new products with improved consumer properties, and to form, on their basis, nutrition rations for military service people – all these make it clear that the research should be carried out in this direction [9,10].

In this regard, the promising direction of improving the existing dry product package is the creation of safe products, wholesome as for their composition and consumer properties, capable of maintaining consumers' health at an appropriate level, and reducing risks of a number of diseases [11].

Literature Review

For the present, many studies have been devoted to the problem of military service people's nutrition, both in the media and in the works by M. P. Gulich (М.П. Гуліч), Yu. M. Deputat (Ю.М. Депутат), I. P. Kozyarin (І. П. Козярін), V. N. Korzun (В. Н. Корзун), V. Yu. Mikhailets (В. Ю. Михайлець), R. S. Rakhmanov (Р. С. Рахманов), V. I. Tsipriyan (В. І. Ципріян), V. Ye. Shevchenko (В. Є. Шевченко), and others. [1,2,12–13].

Between 2014 and 2016, new standards for the nutrition of soldiers in different service conditions, a new menu formation system, and an electronic platform for buying food products and services were developed. As

a result, the ration of military service people increased from 35 to 235 products, the menu was diversified, and the quality of food improved [14–16].

The List of Food Products approved by the Minister of Defense of Ukraine in April 2017 already contained 355 items, namely, vegetables – 67; cereals – 28; spices and sauces – 27; meat and meat products – 65; honey, jam, and chocolate – 20; drinks – 32; fruits, berries, and nuts – 30, etc. The procedure of food product supply to the personnel of the Armed Forces of Ukraine, with the use of the List of Food Products, determines the daily number of kcal for 1 military person. This number ranges from 3,500 to 6,000 Kcal or more. The established norms allowed approaching the standards adopted by the armies of NATO member states [17]. Today, the average number of people who eat every day according to the new system, depending on the conditions of combat training, is 6 to 8 thousand people [14]. However, in the context of combat operations and weather conditions, one of the priority directions of food product supply is improving and expanding the dry product package by including food products with better consumer properties. That is why it is important to establish the criteria a military person could use to evaluate and consume a dry product package with desirable consumer properties.

The purpose of this research is to study military service people's consumer preferences of the existing dry product package and ways to improve it, as well as their attitude towards the consumption of instant cereals. For this purpose, a sociological survey (interview) was conducted – a short, relatively simple marketing research. The information from potential consumers will make it possible to find out the respondents' consumer preferences.

To achieve this goal, the following **tasks** were accomplished:

- carrying out a marketing research into consumer motivations and preferences of the existing set of dry products and ways to improve it;
- studying servicemen's attitude to instant cereals.

The object of the study was potential consumers and their consumer benefits.

Procedural Framework of the Experimental Research

The questionnaire developed for a survey of potential consumers consists of several blocks of questions. The first block determines the respondents' consumer preferences when choosing instant cereals for military service people. The second block studies consumer attitudes towards the food system in field conditions and the existing dry product package. The third block contains the respondents' personal information.

The information obtained was analyzed in the master sample and in groups distributed by the level of education, occupation, age, sex, family status, and regularity of consumption of cereal products.

The research was conducted in April and May 2017 at the Odessa Military Academy. 300 people took part in it. Among the respondents selected, 80% were 18–25 years old, 9% were 26–30 years old, 5% were 31–

45 years old, and 6% were 46–50 years old. Of them, 88% were men and 12% were women, of whom 86% single and 14%, married; 79%, cadets, 17%, ordinary and enlisted staff, and 4%, senior officers. 7% of the respondents had higher education, 37% had incomplete higher education, and 56% had secondary education.

Discussion of the Research Results

The first question in the questionnaire was aimed at studying how intensively military personnel consume ce-

real-based products. According to the research results, the proportion of respondents eating cereals every day is 38%; 2–4 times a week, 41%; approximately 1 time a week, 9%; 1 time a month, 4%; and only 8% eat cereals occasionally. Basing on the results obtained, it was found that all respondents (100%) eat cereal-based products.

To determine the tendencies of preferences of a form of consuming cereal products, the respondents were asked a question, the responses to which are given in Table 1.

Table 1 – Responses to the question about the frequency of cereal products consumption, grouped according to the form of consumption

In what form do you eat cereal products most frequently?						
Distribution of the responses	Form of consumption					
	Instant cereals with meat	Instant cereals with fruits	Garnish for the main course without food fillers and supplements	Garnish with food fillers and supplements	Main course	Component in the process of cooking
Never eat	11.8%	10.0%	5%	5%	10%	60.0%
Eat occasionally	43.5%	49.5%	24%	22%	55%	30.5%
Eat regularly	29.7%	30.2%	55%	60%	20%	9.5%
Eat mostly	15.0%	10.3%	16%	13%	15%	0%

Most respondents regularly consume cereal products in the form of garnishes with food fillers and supplements (60%), garnishes to the main course without food fillers and supplements (55%), instant cereals with fruits (30.2%), and instant cereals with meat (29.7%). 55% of the respondents sometimes eat them in the form of the main course. It is also worth noting that 11.8% do not eat instant cereals with meat, and 10%, instant cereals with fruits. According to the results of the research, it was found that instant cereals are in demand among military service people. Therefore, it was decided to expand the range of dry products for military personnel by including these products.

The second question was aimed at studying consumer preferences when choosing instant cereals. The respondents' answers are given in Fig. 1. According to the research, 174 people (or 58% of the total number of respondents) prefer buckwheat; 48 people (or 16%) prefer oats; 39 people (or 13%) prefer cereals mixtures; rice and corn are preferred by 15 people (or 5%); 9 people (or 3%) chose "others" (millet, barley). During the marketing survey, the question "At what mealtime do you eat cereals?" was also asked. Most of the respondents (66%) answered that they ate cereals for dinner, 13%, for breakfast, 16%, for supper, and 5% of the respondents believed it was insignificant at what mealtime to take cereals.

The next question was "For what purpose do you eat instant cereals?" The analysis of the results of the survey showed that most of the respondents (48%) ate instant cereals because they were good for health; 21%, because they were fast and convenient for satisfying hunger; 14% consumed cereals because they were

tasty; and 17% indicated other reasons. The results of the research show that instant cereals with improved properties will be in demand among potential consumers.

The next was the question "What effect would you like to get from instant cereals?" (Fig. 2). As the results show, the consumers expect to receive a food-balanced product (35%) and a sufficient content of micro and macro elements, as well as vitamins (23%) with certain preventive properties. The results obtained should be taken into account in the future when developing formulations of new cereals.

The results of the respondents' answers to the question "What is the first point you pay attention to when choosing instant cereals?" are shown in Fig. 3. When choosing instant cereals, a consumer's primary consideration is the taste (26%); the nutritional and energy value is in the second place (22%); the type of grain crop or that of additives is in the third place (14%); and the least significant factors influencing the choice of instant cereals are the trade mark and country of origin (4%), and the shape and design of packaging (1%).

Since the taste is the main criterion for choosing instant cereals, we conducted a research on the respondents' taste preferences (Fig. 4). As a result, it was found that the majority of the respondents preferred meat (32%) and fruit (29%) additives, milk (15%) and vegetable (10%) additives. The results obtained should be taken into account when developing formulations of new instant cereals in the future.

The next stage of our research was studying the quality of instant cereals that are sold in the retail network of Odessa.

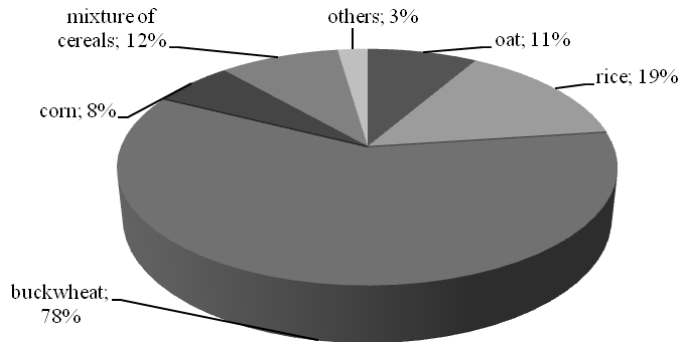


Fig. 1. Consumer preferences by the types of cereal raw materials, % of the respondents

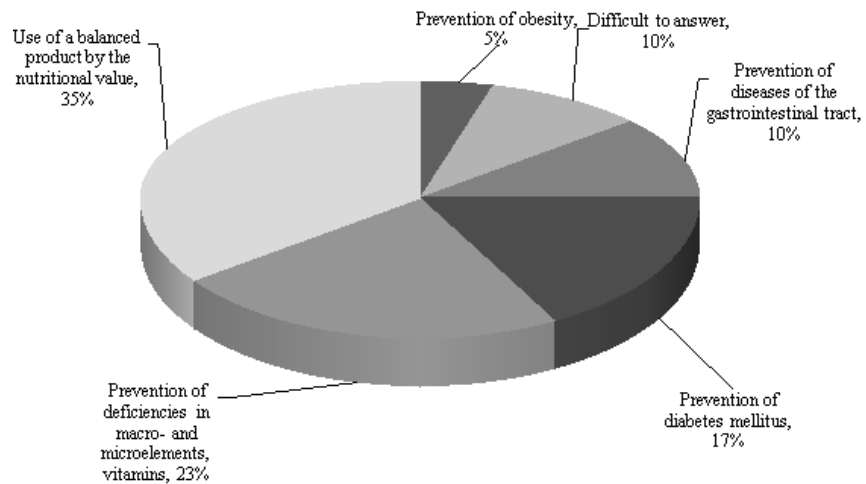


Fig. 2. Effect that respondents would like to get from instant cereals

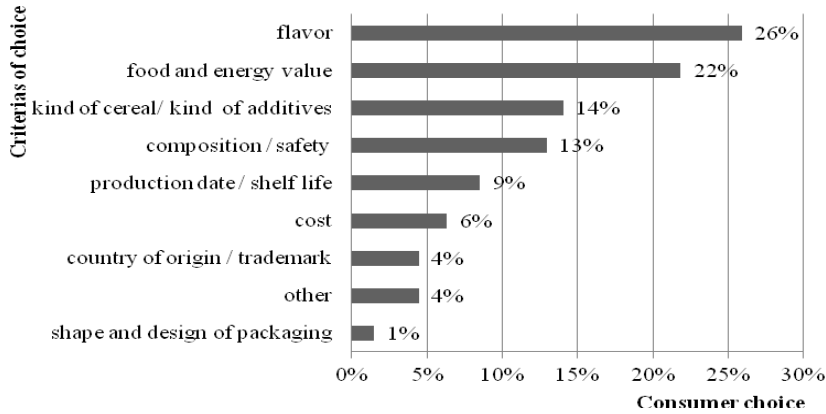


Fig. 3. Factors influencing the respondents when they are choosing instant cereals, % of the respondents

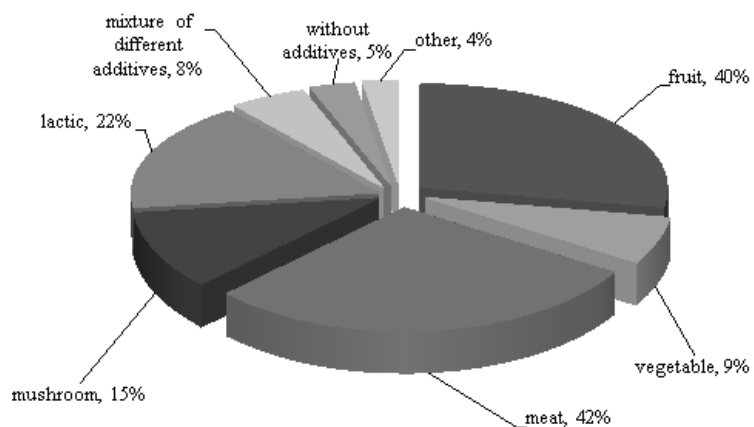


Fig. 4. Taste preferences of the respondents

Answering the question “What manufacturer does a consumer prefer when buying instant cereals?”, most respondents (69%) said they bought instant cereals of domestic brands; 22% preferred import brands; and only 9% of the respondents said that the manufacturer did not matter. The results obtained show, in the first place, the trust in the quality of products from domestic manufacturers.

In the course of the survey, the consumers also answered questions about the place where they bought products. The most common place to buy instant cereals is a supermarket (66% of the respondents), 19% buy cereals in stores, 12% order online, 3% of the respondents buy it at the market. The analysis of the data shows that supermarkets are the most effective channel for selling products.

The respondents were asked, “How do you rate the quality of instant cereals that are sold in the retail network of Odessa?” The responses were as follows: 50% of the respondents estimated the quality of instant cereals as “good”; 9%, as “excellent”; 30%, as “satisfactory”; 11% of the respondents were dissatisfied with the quality; and only 5% hesitated when answering the question.

The results of this block of the marketing research indicate the prospect of developing new instant cereals with improved consumer properties in order to expand the existing assortment of dry products for military service people.

As we are planning to include our new instant cereals with improved consumer properties into our troops’ diet in field conditions, it was decided to study the respondents’ attitude to their health. The responses to the question “Do you take control of your health?” showed that 80% of the respondents regularly took control of their health by means of an annual medical examination; 15% did it not regularly; and 5% found it difficult to answer the question.

As for the question “Do you take vitamin and mineral additives?”, the respondents’ answers showed that 62% did not take, and 38% took vitamin and mineral supplements. The results obtained show that it is practical to develop instant cereals with a balanced vitamin and mineral composition for military personnel.

To the next question of the questionnaire “Do you feel any negative changes in your body that are due to your professional activity?”, 35% of the respondents answered “Yes”; 22% answered “Yes, but not sure that it is related to the professional activity”; and 43% answered “No.” It should be noted that the highest percentage of positive responses (23%, or 70 respondents) is by soldiers serving in field conditions, whose service is accompanied by physical exertion, need for long standing and sitting, and work in unfavorable conditions. It should be noted that the negative changes the respondents noticed in their body were those in the cardiovascular system; they also noticed deterioration of the state of the nervous system and rapid fatigabil-

ity. This fact is, in our opinion, connected with the activity in stressful conditions and great responsibility concerning the tasks set. All stated above allows us to draw a conclusion that there is a need to expand the existing assortment of dry product packages for military service people by including new balanced products into their composition.

The next block of the marketing research is aimed at the direct study of consumer attitude towards the field food system and the existing dry product package. The respondents were asked, “Does the field food system satisfy you?” 53% of respondents are not satisfied with the field food system; 16% are satisfied; and 32% found it difficult to answer. The respondents’ answers to the question “Do you consider it necessary to organize hot meals in the field?” showed that 87% considered it necessary to organize hot meals in the field; 13% hesitated. After the question “Do you think hot meals in the field will have a positive effect on your well-being?”, 83% of the respondents believed that hot meals in the field will improve it; 13% did not think so; and 4% were not sure.

The respondents were asked, “Do you consider the product package you eat in the field is enough for you?” The respondents’ answers showed that 67% considered the field product package for military service people insufficient; 29% gave a positive answer; and 4% found it difficult to answer.

Fig. 5 shows the responses to the question “What does not satisfy you in the daily field product package that you consume in field conditions?” It turned out that most respondents were not satisfied with the sameness (35%), a limited choice of dishes (21%), nutritional value/caloric content (11%), and the number of dishes in the dry product package (10%). The answers prove that it is necessary to expand the assortment of the existing dry product package.

As for the question “What kind of food product does not satisfy you in the daily field product package?” the research showed that 55% of the respondents were dissatisfied with the ready-to-serve second courses (cereals with vegetables or meat); 26%, with the ready-to-serve first dishes (meat soup or borsch with meat); 5%, with the ship breads; 4%, with crackers; and 10% found it difficult to answer. The results of the study showed that it was necessary, first of all, to improve the ready-to-eat second dishes. In this connection, it will be desirable to develop new cereals with improved consumer properties.

For the question “Do you think instant cereals with high nutritional value are worth including into the daily field product package?”, the survey showed that a significant percentage of consumers (68% of the respondents) positively took the inclusion of instant cereals into the daily field product package; 19% of the respondents were not sure; and 16% of the respondents did not consider it appropriate to include instant cereals into the daily field product package.

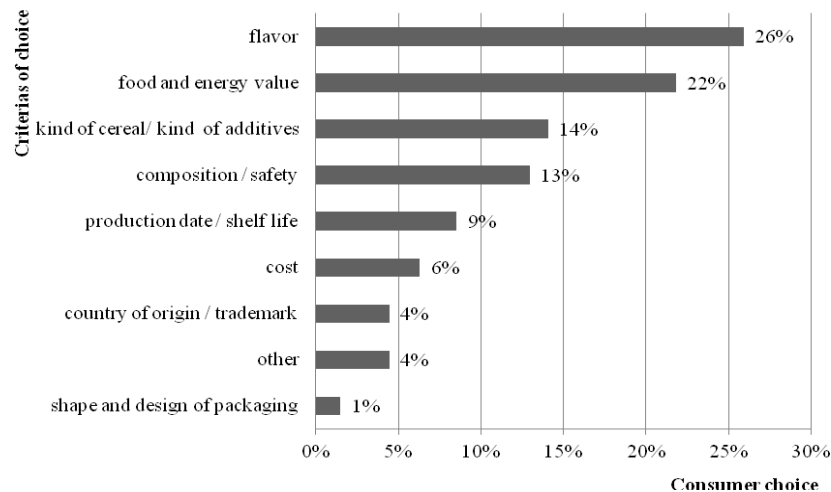


Fig. 5. What does not satisfy the respondents in the daily field product package

The following questions are aimed at finding out the requirements for packaging of the daily food product package. The respondents' answers to the question "Are you satisfied with the existing packaging of the daily field product package?" showed that 54% of the respondents were not satisfied with it; 27%, were satisfied; and 19% of the respondents were not sure. The analysis of the answers to the question "What do you think needs to be improved in packaging the daily field product package?" gave the following results: 45% of the respondents considered it necessary to add flatware; 17%, to reduce the weight of the package; 13%, to make it easier to open the packages; 10%, to add a color indicator of the shelf life; 6%, to supplement the marking; 5%, to improve the aesthetic properties; and 4% gave a different answer.

Conclusion

The results of the survey showed that soldiers were not satisfied with the existing daily field product package; most of them were not comfortable with the sameness of the assortment, cooking time, not convenient packing, and the lack of individual flatware.

According to the results of the analysis of the questionnaires of the people interviewed, it may be stated that 68% are already comfortable with the inclusion of instant cereals with improved consumer properties into the daily field product package, and other consumers' attitude to them may be significantly improved due to the explanatory work on the benefits of this product.

The analysis of the respondents' answers concerning the nature of the most common negative changes in the body as a result of their professional activity indicates that the development of instant cereals based on natural components is promising, and it should prevent the manifestation of fatigue and prevention of certain diseases.

It is found that the most important factors for military service people when choosing instant cereals are taste, composition/safety, nutritional and energy value, and the least important are the shape and design of packaging.

Thus, the marketing research conducted shows that a consumer wants to get a product, namely instant cereals with meat and fruit flavor with improved consumer properties, and most importantly, the product should be tasty, of high quality, and harmless. Military service people will be the main consumers, regardless of their age, occupation, and education.

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