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CONSUMERS OF PRODUCTS WITH HEALTH CLAIMS IN THE WESTERN BALKANS: PRODUCERS' PERCEPTION AND REALITY[1]

Potrošači proizvoda sa zdravstvenom izjavom na Zapadnom Balkanu: percepcija proizvođača i realnost

Abstract

The study presented in this paper aimed to investigate how producers of functional foods comprehend their typical consumers in the Western Balkan countries and to what extent that perception differs from actual features of consumers of these products. Consumers sample included 3085 respondents, coming from six countries of the region. They were investigated by using face-to-face interviews, while stratified three-stage random sampling method was adopted in order to ensure nationally representative samples. Producers sample consisted of 29 companies, comprising all leaders in the sector of functional foods in the Western Balkans. They were examined through in-depth interviews. Results revealed that producers evaluate consumers' characteristics in a right manner concerning their age, income and education level, whereas their viewpoints on consumers family status, gender, and state of health failed to be corroborated by findings established by consumer survey. In addition, the Western Balkans consumers appear to contrast with their global counterparts in terms of gender and the importance of presence of children in the households. These conclusions suggest that producers need to modify their marketing communications in order to better address their targeted consumer segments. They should put more efforts in educating consumers about the benefits of the consumption of functional foods as well as in communicating with female population. Since this paper presents the first attempt to comprehend the validity of functional food producers' perception of their consumers in this region, it may be a valuable benchmark for future studies in the field.

Key words: *health claims, consumers, Western Balkans, functional foods*

Sažetak

Cilj rada je da istraži kako proizvođači funkcionalne hrane percipiraju svoje tipične potrošače na Zapadnom Balkanu, kao i u kojoj meri se ta percepcija razlikuje od stvarnih karakteristika potrošača njihovih proizvoda. Istraživanje je sprovedeno na uzorku od 3085 potrošača, sa teritorije šest država posmatranog regiona. Korišćena je tehnika ličnog intervjua, dok je primenjen troetapni stratifikovani slučajni uzorak kako bi se obezbedila nacionalna reprezentativnost uzoraka. U ispitivanju je učestvovalo i 29 kompanija, uključujući i sve lidere u sektoru funkcionalne hrane na Zapadnom Balkanu. U ovom slučaju je primenjena tehnika dubinskog intervjua. Rezultati su pokazali da proizvođači sagledavaju svoje potrošače ispravno u pogledu njihove starosti, dohotka i nivoa obrazovanja; dok njihova mišljenja o porodičnom statusu, polu i zdravstvenom stanju njihovih potrošača nisu bila potvrđena rezultatima istraživanja na uzorku potrošača. Pored toga, čini se da se potrošači funkcionalne hrane na Zapadnom Balkanu razlikuju od globalnih potrošača po polu i važnosti prisustva dece u domaćinstvu. Ovakvi rezultati navode na zaključak da bi možda proizvođači trebalo da prilagode svoje marketinške komunikacije kako bi na bolji način targetirali svoj ciljni segment. Trebalo bi i da ulože više napora u edukaciju potrošača o koristima koje se dobijaju konzumiranjem funkcionalne hrane, kao i u komunikaciju sa ženskom populacijom. S obzirom na to da ovaj rad predstavlja jedan od prvih pokušaja sagledavanja ispravnosti percepcije proizvođača funkcionalne hrane o njihovim potrošačima u ovom regionu, pretpostavka je da će biti dobra polazna osnova za buduće studije iz ove oblasti na ovim prostorima.

Ključne reči: *zdravstvene izjave, potrošači, Zapadni Balkan, funkcionalna hrana*

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Introduction

The market of functional foods continually rises [16], [2], attracting more attention of both practitioners and scholars. The Eastern European market has proven to be increasingly relevant for this product category [7]. In spite of this, it could be noted that there are a vast number of studies that tackled functional food market in developed countries (U.S. and EU mainly), while consumer behavior in this regard has remained understudied in emerging markets [17], [19], [5]. Several scholars [6], [11] called for attention with reference to this observation, emphasizing that European market is heterogeneous in terms of acceptance of functional foods and appraisal of their characteristics. Therefore, it can be concluded that it is necessary to conduct more research on this matter in developing countries and thus contribute to better understanding of the functional food consumption patterns and market potentials in those regions.

It can be argued that of numerous socio-demographic characteristics that have been examined in a broad range of studies undertaken on the subject of functional food consumption, just few of them proved to be significant. Nevertheless, research studies consistently point out that socio-demographic features have certain weight in explaining differences in acceptability and tendency to use functional foods [18], [2]. There is general consensus that female population demonstrates stronger purchase interest towards this kind of food [3], [12]. This fact is quite salient, bearing in mind that women are usually responsible for food purchasing in the households. Moreover, functional food users in Europe are often more educated and of higher economic status [9], [1]. However, in the domain of consumers' age there cannot be found such unanimity of opinions and findings. According to *Poulsen* [12] and *Urala* [15], elderly people (older than 55 years) are more willing to buy functional foods, which is opposite to the findings of *Childs* [3]. Another important socio-demographic attribute pertains to the presence of children in households [21], [19]. This finding may be explained in the way that the families with children potentially have higher risk aversion, while they also opt for fortified foods.

Studies [15], [10] consistently allege that one of the crucial motives for consumers to use functional foods is the preservation of good health status. With regard to the health claims (HC) as indications of functional foods, even though they are perceived to be useful [20], consumers are usually skeptical about their trustworthiness [19]. It should be noted that the knowledge of food and food ingredients contributes positively to the consumption of functional foods [4] and that more informed (i.e. knowledgeable) consumers understand better [8] benefits they could gain from a balanced diet. Indeed, as *Sun* [14] concluded, individuals' perception of their health status, health concerns and nutritional knowledge would affect the formation of their healthy eating attitudes, and consequently, their habits related to the use of functional foods.

Stemming from the overview of literature on this subject and observed research gaps, this study aimed to explore the producers' perception of functional food consumers, as well as the typical consumer profile, in order to establish the degree to which these two coincide and to suggest more effective marketing approach.

Research methodology

The research procedure included both qualitative and quantitative methods, depending on the target group that was examined.

Consumers were investigated through face-to-face interviews at respondents' homes. The sample included 3085 respondents, coming from six Western Balkan countries (WBC), namely: Bosnia-Herzegovina, Croatia, Former Yugoslav Republic of Macedonia, Montenegro, Serbia and Slovenia. The questionnaire was administered to approximately 500 respondents in each country, while stratified three-stage random sampling method was adopted, in order to ensure nationally representative samples. Respondents' personal characteristics are provided in Table 1.

In the introductory part of the survey it was explained to the respondents what it was meant by the term "products with HC" and some examples were given. We considered this to be important since some previous studies [17], [4] identified that consumers in various European countries

often are not familiar with the term of "functional foods" or related concepts (e.g. health claims). The formulation in the questionnaire was as following: "Health claims that we see on product packages are claims that link a nutrient to a normal functioning of the body or a specific disease. An example of a health claim – High in calcium, Calcium helps build strong bones. Adequate calcium throughout life, as part of a well-balanced diet, may reduce risk of the osteoporosis". Some pictures with products with HC (e.g. probiotic yoghurts, milk enriched with vitamins and minerals, etc.) were also provided, ascertaining respondent's better apprehension of this kind of the food.

Self-reported assessment was applied in responses to questions about: a) frequency of consumption, b) respondent's level of information on food with HC, c) whether participant perceives HC made on product labels to be useful, d) his/her state of health, e) standard of his/her household. For evaluation of the frequency of consumption 10-points scale was used, including subsequent items: more than twice a day, twice a day, once a day, once in 2-3 days, once a week, 2-3 times a month, once a month, several times a year, once a year or less, never. Answer modalities for the other questions can be observed in Table 1.

With regard to the producers, in-depth interviews were considered to be a right technique to apply. These interviews allow face-to-face discussion and yield valuable information about the consumption of these products. The questionnaire included generally open questions with combination of given list of answers in some cases (ranks or marks of main problems, difficulties, characteristics etc.), so that the discussion might be deepened on different topics. They were facilitated by a trained person and lasted approximately an hour. Totally 29 producers have been interviewed in all WBC. Given that 15 companies are leaders in studied categories in their countries, interviewed producers can be considered to be representative for the sector of functional foods.

Producers' answers were analyzed through the observation and description of typical statements, while in the case of consumers, multiple linear regression was run aiming to establish whether certain respondent's features affect his/her frequency of purchasing the products with HC. These results are accompanied with descriptive statistics, which should help to better understand the obtained data in regression analysis.

Table 1: Statistical features of the consumers' responses

Variant	Sample population	Percentage
Gender		
Male	1186	41.1
Female	1698	58.9
Age		
18-30	792	27.5
31-50	947	32.8
51-65	709	24.6
66 or above	436	15.1
Education		
Unfinished elementary school	639	22.2
Finished elementary school	69	2.4
Finished secondary school	1630	56.5
College or university degree	546	18.9
Standard of household		
Bad	438	15.2
Moderate	1474	51.1
Good	972	33.7
Children in household		
Yes	776	26.9
No	2108	73.1
State of health		
Very bad	41	1.4
Bad	209	7.2
Moderate	880	30.5
Good	1209	41.9
Very good	545	18.9
Body Mass Index		
Underweight (<18.4)	80	2.8
Normal (18.5 to 24.9)	1447	50.2
Overweight (25 to 29.9)	1034	35.9
Obese (>= 30)	323	11.2
Level of information		
Not informed at all	206	7.1
Very poorly informed	626	21.7
Moderately informed	1378	47.8
Very well informed	517	17.9
Fully informed	157	5.4
HC on products labels are useful		
Agree	2082	72.2
Disagree	802	27.8

Results and discussion

Producers' perspective

Producers' perception of the consumers of products with HC is quite identical in all WBC. Consumers are generally perceived to be women, belonging to the age groups of 15 to 40 years, or elder (40-64), with higher or middle income, secondary or high education, with or without health problems, living in urban areas. Moreover, they are mostly regarded as persons who practice a healthy life style, follow modern trends and fashion in food consumption, active (sportsmen, businessmen) or mothers who are expected to provide healthy food for their families.

However, several producers in each country also indicated men to be consumers of products with HC. Additionally, other age groups were also mentioned – particularly middle age and older people (from 40 to 64, 65+ to lesser extent) and in just a few cases the young population was also specified. Producers generally agree that the consumers of products with HC have higher or average income and live in urban or suburban areas. There are no explicit differences concerning this issue either by product categories or by the countries covered by the study:

- *Small group of people. Lifestyle that they lead is a very important criterion for distinguishing them from other consumer segments. They take more care about health and follow trends.* (Serbian producer)
- *Active lifestyle, mothers.* (Slovenian producer)

Regarding the consumers' knowledge and awareness of HC, producers think, with just a few exceptions (Serbia, Bosnia and Slovenia), that consumers do read information provided on the food packaging prior to making purchases. Furthermore, producers in WBC have named other important sources of information for the local consumers: word-of-mouth, newspapers and magazines, as well as the contact with salespeople and other company representatives who are in charge of providing information to customers.

- *They read labels more often than it was the case in the past, but still it is not enough. Consumers usually read labels before making a purchase of some product. They want to know what they are giving their money for.* (Serbian producer)
- *In general, those who take care about their consumption, they read labels before buying.* (Montenegrin producer)
- *They read information on labels and on packaging, watch ads on TV, and read articles in different health and lifestyle magazines.* (Slovenian producer)
- *Those consumers who are interested in the matter call our sales department and ask about a certain product. Some of them get the information by asking a friend or a relative who is consuming a specific product.* (Macedonian producer)

To communicate health benefits of functional foods WBC producers use all available promotional tools and media – packaging (verbal descriptions and pictures), sales promotions, TV advertising, billboards, leaflets and brochures, media announcements, press releases and other PR tactics, but also well-educated personnel in specialized shops who would be ready to provide advice to consumers.

Consumers' characteristics

After records with missing data had been removed, 2884 responses were retained for statistical analysis. In order to assess the factors of influence on the frequency of consumption of products with HC, a multiple linear regression was performed. The complete list of the variables included in the model is presented in Table 2. Four kinds of explanatory factors are considered: socio-demographic (e.g. gender, age, education, etc.), physiological (overall

Table 2: Descriptive statistics

Variable	Mean	Std. Deviation
How often they consume products with HC	5.3	2.4
Gender	1.6	0.5
Age	2.3	1.0
Education	2.7	1.0
Standard of a household	2.2	0.7
Children in a household	0.3	0.4
Overall current state of health	3.7	0.6
BMI	3.6	0.5
Level of information	2.9	0.2
HC on product labels are useful	1.3	0.4

state of health and body mass index), level of information (knowledge) on products with HC and skepticism about products with HC.

The regression model explained 37.1% of the variance of the experimental data. The results of the regression analysis are reported in Table 3. Among socio-demographic explanatory variables affecting frequency of consumption of products with HC, age, education, and economic standard of a household had significant influence. Consumers with higher educational level and higher income would buy products with HC more often, which supports some previously published data [18], [9]. Concerning the age, results indicated that older consumers were less likely to consume products with HC than younger ones.

Physiological factors, overall state of health, and body mass index have not proved to be statistically significant in predicting the frequency of the consumption of HC products. A reason for this can be found in the fact that respondents estimated their generic health status, without concentrating on some particular health issues that they could be concerned of, whereas some preceding studies denoted that the use of functional foods was associated with specific health problems [19] and thus, with specific functional food types as well as the care about calories intake [14].

As expected, respondents who considered being better informed about this kind of food, tended to consume the products with HC more often. Similar findings are revealed regarding the consumers' skepticism about products with HC – consumers who agreed with the statement that HC made on product labels were useful in helping them to decide which product to consume, used items with HC more frequently. These outcomes corroborate conclusions drawn by *Grunert*, *Scholderer* and *Rogeaux* [8] and by *Sun* [14].

Table 3: Regression results for frequency of consumption

Variable	Beta	P
Gender	0.001	> 0.05
Age	0.041*	< 0.05
Education	-0.057**	< 0.01
Standard of a household	-0.106**	< 0.01
Children in a household	0.022	> 0.05
Overall current state of health	0.033	> 0.05
BMI	0.009	> 0.05
Level of information	-0.319**	< 0.01
HC on product labels are useful	0.101**	< 0.01

Asterisks indicate that estimated coefficients are significant at *5% or **1% level of confidence

Conclusions and implications

Comparative analysis of the characteristics of the typical consumer of functional foods and producers' perception of these revealed interesting outcomes. It can be concluded that producers understand a typical consumer of the products with HC in terms of his/her age, education and purchase power. The examination shows that the consumers of functional foods are young, with higher income and higher level of education than average, which is in line with findings of previous studies undertaken on this matter [9], [1], [3], [13].

On the other hand, producers gave greater weights to certain consumers' attributes than it was proved by the factual state of affairs. Most surprisingly, our study failed to demonstrate that gender plays a significant role in defining a typical consumer of functional foods. Although preceding research studies [12], [18] unanimously exhibit that women are more prone to purchase products with HC, there was no established statistically significant relation between frequency of purchase of functional foods and respondents' gender in our study. In addition, both the presence of children in households and respondents' state of health have not appeared to be significant, which differs from the results ascertained in previous studies [10], [15], [19], [21].

Given that both WB producers' opinions and the previous body of research indicate that functional food consumers are primarily females, but considering that that was not underpinned by the survey results, it can be alleged that companies should put more efforts in education and do better communication targeting of women in WBC. This statement especially pertains to mothers, in the sense that they should be explained how the consumption of products with HC may be beneficial

to their families. Notwithstanding the fact that numerous producers stated they used all available media to inform consumers on various aspects of functional foods, it is acknowledged by consumers' responses that informative activities should be broaden and conducted in more effective manner. Provided that typical consumer of functional foods is from the younger cohort and in view of the Internet communication tools characteristics (not expensive, allow production of interactive and detailed content, etc.), online media are considered to be an adequate choice.

Based on the results of our survey, it might be advocated that the relation of one's health status and their consumption of products with HC should not be emphasized in the promotion of functional foods at this moment. However, the insignificance of that relation also indicates that marketers should commit more to explaining and educating consumers on associations of their consumption patterns and their state of health.

Finally, some limitations should be mentioned too. Firstly, self-reported measures as the indicators of consumption frequency and level of information on products with HC were applied, which may lead to fairly inaccurate assessments. Secondly, since face-to-face interviews were conducted, that might imply sensitivity to socially desirable answers. In order to further improve studies in this field, the use of diary method could be more reliable in investigating consumption and level of knowledge on functional foods. Further research should investigate whether the promotion of products with HC could contribute to a shift in the overall diet towards healthier food choices, which should lead to a general improvement of the food chain competitiveness.

References:

1. Anttolainen, M., Luoto, R., Uutela, A., Boice, J. D., Blot, W. J., McLaughlin, J. K., & Puska, P. (2001). Characteristics of users and nonusers of plant stanol ester margarine in Finland: An approach to study functional foods. *Journal of the American Dietetic Association, 101*(11), 1365-1368.
2. Ares, G., & Gambaro, A. (2007). Influence of gender, age and motives underlying food choice on perceived healthiness and willingness to try functional foods. *Appetite, 49*(1), 148-158.
3. Childs, N. M. (1997). Functional foods and the food industry, consumer, economic and product development issues. *Journal of Nutraceuticals, Functional and Medical Foods, 1*, 25-43.
4. Christidis, N., Tsoulfa, G., Varagunam, M., & Babatzimopoulou, M. (2011). A cross sectional study of consumer awareness of functional foods in Thessaloniki, Greece. *Nutrition & Food Science, 41*(3), 165-174.
5. Dmitrović, T., Vida, I., & Reardon, J. (2009). Purchase behavior in favor of domestic products in the West Balkans. *International Business Review*, *18*(5), 523-535.
6. Frewer, L., Scholderer, J., & Lambert, N. (2003). Consumer acceptance of functional foods: Issue for the future. *British Food Journal*, *105*(10), 714-731.
7. GIA. (2010). *Functional foods and drinks: A global strategic business report*. Retrieved from http://www.prweb.com/releases/functional_foods/functional_drinks/prweb4688424.htm
8. Grunert, K. G., Scholderer, J., & Rogeaux, M. (2011). Determinants of consumer understanding of health claims. *Appetite, 56*(2), 269-277.
9. Hilliam, M. (1996). Functional foods: The Western consumer viewpoint. *Nutrition Research, 54*(11), S189-S194.
10. Krystallis, A., Maglaras, G., & Mamalis, S. (2008). Motivations and cognitive structures of consumers in their purchasing of functional foods. *Food Quality and Preference, 19*(6), 525-538.
11. Milošević, J., Žeželj, I., Gorton, M., & Barjolle, D. (2012). Understanding the motives for food choice in Western Balkan Countries. *Appetite, 58*(1), 205-214.
12. Poulsen, J. B. (1999). *Danish consumers' attitudes towards functional foods* (Working Paper 62). Aarhus: Aarhus School of Business, MAPP.
13. Stojanović, Ž., Ognjanov, G., Spiroski, I., & Zaouche-Laniau, M. (2013). Exploring an emerging market through focus groups and expert interviews: Health claim products in the Western Balkans. In D. Barjolle, M. Gorton, J. Milošević Đorđević & Ž. Stojanović (Eds.), *Food Consumer Science: Theories, Methods and Application to the Western Balkans* (pp. 57-72). Springer.
14. Sun, Y. H. C. (2008). Health concern, food choice motives, and attitudes toward healthy eating: The mediating role of food choice motives. *Appetite, 51*(1), 42-49.
15. Urala, N. (2005). *Functional foods in Finland: Consumers' views, attitudes and willingness to use*. Retrieved from http://www.vtt.fi/inf/pdf/publications/2005/P581.pdf
16. Urala, N., & Lahteenmaki, L. (2007). Consumers' changing attitudes towards functional foods. *Food Quality and Preference*, *18*(1), 1-12.
17. van Trijp, H. C. M., & van der Lans, I.A. (2007). Consumer perceptions of nutrition and health claims. *Appetite, 48*(3), 305-324.
18. Verbeke, W. (2005). Consumer acceptance of functional foods: sociodemographic, cognitive and attitudinal determinants. *Food Quality and Preference, 16*(1), 45-57.
19. Verbeke, W., Scholderer, J., & Lahteenmaki, L. (2009). Consumer appeal of nutrition and health claims in three existing product concepts. *Appetite, 52*(3), 684-692.

20. Williams, P. (2005). Consumer understanding and use of health claims for foods. *Nutrition Research, 63*(7), 256-264.

21. Xu, L., & Wu, L. (2008). Food safety and consumer willingness to pay for certified traceable food in China. *Journal of the Science of Food and Agriculture*, *90*(8), 1368-1373.

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