

## Acceptance of food with "health claims" in Serbia: consumers' profile research and recommendations for promotion

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### **Abstract**

The usage of marketing concept by companies enables them, among other contributions, to reduce costs by obtaining and keeping loyal consumers of their products. The implementation of that concept involves strategic issues (also related to consumers' profile research) and tactical considerations (referring to marketing mix, including promotion). Market of food with "health claims" whose development is impressive in different parts of the world, started to develop in Serbia, as well. However, the researches dealing with current level and especially ways to increase further consumers' acceptance of this food are rather scarce in domestic conditions. This paper describes the research conducted in Serbia in May, 2013, in which 330 respondents' acceptance of food with "health claims" (presented by low-fat food, low-sugar food, food enriched with vitamins and minerals, as well as probiotics) was quantified and profiles of low- and high-frequent consumers were described in context of their socio-demographic characteristics. Starting from the results of conducted marketing research, recommendations for promotion in function of increasing this food acceptance and obtaining loyal consumers (thus reducing suppliers' costs) were considered.

**Keywords:** Food with health claims. Consumers' profile. Promotion.

## 1. Introduction

Generally, the usage of marketing concept by companies is related to satisfying consumers' needs and thus obtaining long-term profitability (KOTLER & KELLER, 2006; JOBBER & FAHY, 2006). Higher level of consumers' satisfaction increases possibility for a company to obtain loyal consumers (OLIVER, 2010). By having loyal consumers companies can decrease their costs since costs of obtaining new consumers are significantly higher compared to costs of keeping the current ones (PELTON, STRUTTON & LUMPKIN, 2006), as well as because costs of losing one loyal consumer are significantly high (GRUEN & CORSTEN, 2007). In that way companies using marketing concept can positively affect own long-term profitability.

Within the company, marketing management process is implemented through a number of steps (KOTLER, 2007). This process starts with marketing research, continues with strategic marketing (including market segmentation, targeting and positioning) and completes with tactical marketing (related to creating marketing mix, its implementation and control). Marketing management process presents theoretical framework of this paper. Out of steps within that process, this paper is focused on consumers' profile research (i.e. market segmentation) and promotion as one of marketing mix instruments.

Market segmentation is identification of individuals or organisations with similar characteristics, with significant implications for determining marketing strategy (JOBBER & FAHY, 2006) whereas, regarding final consumer markets, criteria grouped into geographic, demographic, psychographic and behavioural can be used as the basis for segmentation (KOTLER & KELLER, 2006). As already suggested, market segmentation is followed by decisions which of the identified segments to target, as well as with searching ways how to take a distinctive position in consumers' minds, after which marketing mix (product, price, place and promotion) is being created, implemented and controlled. Promotion can be considered from a perspective of its latest paradigm i.e. integrated marketing communications referring to „theoretical perspective that advocates a high level of communication interaction between a brand's marketers and its consumers coupled with a high degree of message consistency across a brand's entire marketing mix, ranging from the product itself to all marketing communications media” (McGRATH, 2010). Hereby, means-end approach to consumer behaviour can be applied, considering that consumers are not interested in a product

*per se*, but are interested in it regarding the way it helps them attain their life values (REYNOLDS & OLSON, 2001).

Besides, marketing management process steps are within this paper in relation to market of food with "health claims". Food with "health claims" can be related to functional food, which is most intensively researched within this group, as well as with low-fat and low-sugar food. There can be identified dynamic development of food with "health claims" market in different parts of the world (MENRAD, 2003) since consumers increasingly relate their health to food they eat (GRUNERT, 2005) and are, in that sense, motivated for buying food considered healthy (URALA & LÄHTEENMÄKI, 2003; VERBEKE, 2005). Consumers are also crucial for this food future market development (FREWER, SCHOLDERER & LAMBERT, 2003). That is the reason of conducting numerous consumers' researches, including researches of their profile (e.g. CHILDS & PORYZEES, 1998; DE JONG, OCKÉ, BRANDERHORST & FRIELE, 2003; URALA & LÄHTEENMÄKI, 2003; MENRAD, 2003; BECH-LARSEN & GRUNERT, 2003; URALA, ARVOLA & LÄHTEENMÄKI, 2003; URALA & LÄHTEENMÄKI, 2004; VERBEKE, 2005; VERBEKE, 2006; ARES & GÁMBARO, 2007; KRYSTALLIS, MAGLARAS, MAMALIS, 2008; ARES, GIMÉNEZ & GÁMBARO, 2008; ARES, GIMÉNEZ & GÁMBARO, 2009). The results of such researches will be described more in details in literature review section of this paper.

Food with "health claims" emerged on Serbian food market after the year 2000 and is presented mostly by domestic brands and characterised by potential of significant further consumption growth (STOJANOVIC, ZAOUCHE-LANIAU & ESTEVE, 2010). Some of domestic researches focus on the presence of health claims and consumers' protection (STANKOVIĆ, ARSIĆ & RAKIĆ, 2012). However, with several exceptions (STOJANOVIC, ZAOUCHE-LANIAU & ESTEVE, 2010; STOJANOVIĆ & BARJOLLE, 2012), the researches dealing with current level and especially ways to increase further consumers' acceptance of this food are rather scarce in domestic conditions. In this paper, the acceptance of food with "health claims" (presented by low-fat food, low-sugar food, food enriched with vitamins and minerals, as well as probiotics) by consumers in Serbia was quantified and profiles of low- and high-frequent consumers were described in context of their socio-demographic characteristics. Besides, starting from the results of conducted marketing research, further recommendations for promotion in function of increasing this food acceptance were considered. Since this food market is still growing, promotion mix will be suggested for targeting high-frequent consumers. In addition, the results can be significant for

companies engaged at supply side of this food market to attempt to obtain loyal consumers thus decreasing their costs.

## 2. Literature Review and Hypotheses Development

The researches of food with "health claims" consumers' segments are often characterised by relating consumers' socio-demographic profile to different aspects of this food acceptance. Most of these researches are, as already mentioned, focused on functional food consumers.

There are researches point out women being more in favour of concept of food with "health claims": they believe more this food contains natural substances preventing diseases' occurrence (CHILDS & PORYZEES, 1998), they perceive more healthiness and are more willing to taste this food (ARES, GIMÉNEZ & GÁMBARO, 2009) and they consider more advantages of health claims (URALA, ARVOLA & LÄHTEENMÄKI, 2003). According to consumers' gender, it is possible to predict the consumption (DE JONG, OCKÉ, BRANDERHORST & FRIELE, 2003), as well as perceived healthiness and willingness to taste various products belonging to this food (ARES & GÁMBARO, 2007). However, Verbeke (2006) reports that while in 2001 women were more willing to compromise on food taste because of health, in 2004 they were not different from other respondents.

A number of researches emphasize differences between age groups regarding different aspects of accepting this food: the belief that food contains natural substances preventing diseases' occurrence (CHILDS & PORYZEES, 1998), the willingness to compromise between liking the food and perceived healthiness if believed that food is useful for health (ARES, GIMÉNEZ & GÁMBARO, 2008), the most frequently bought food, the most important attributes affecting purchases, motives and behaviour (KRYSTALLIS, MAGLARAS, MAMALIS, 2008), the valuation of different health claims (ARES, GIMÉNEZ & GÁMBARO, 2009), the consumption (DE JONG, OCKÉ, BRANDERHORST & FRIELE, 2003), as well as perceived healthiness and willingness to taste various food products (ARES & GÁMBARO, 2007). As for the gender, Verbeke (2006) reports that while in 2001 older consumers were more willing to compromise on food taste because of health, in 2004 they were not different from other respondents. Besides, Urala, Arvola and Lähteenmäki (2003) find no importance of age in relation to consumers' validation of benefits from health claims on products.

The higher levels of consumers' education and income positively affect their belief that food contains natural substances preventing diseases' occurrence (CHILDS & PORYZEES, 1998). According to respondents education, it is possible to predict the consumption of various food products, as well (DE JONG, OCKÉ, BRANDERHORST & FRIELE, 2003). However, Urala, Arvola and Lähteenmäki (2003) report level of education having no influence on validating benefits from health claims on products.

As it can be seen from various researches, there are some contradictions when profiling food with "health claims" consumers. These contradictions can be partly explained in the context of different countries (MENRAD, 2003; BECH-LARSEN & GRUNERT, 2003), different products and/or their enrichment (DE JONG, OCKÉ, BRANDERHORST & FRIELE, 2003; BECH-LARSEN & GRUNERT, 2003; URALA & LÄHTEENMÄKI, 2003; URALA & LÄHTEENMÄKI, 2004; ARES & GÁMBARO, 2007), diminishing significance of socio-demographic variables as market develops (VERBEKE, 2006), or low significance of these variables in comparison to cognitive and attitudinal determinants (VERBEKE, 2005). However, it does not bring in question the usage of socio-demographic variables as descriptors of market segments, not only because they are implicitly present in behaviour theories related to consumers' food choices: the Theory of Reasoned Action and its later modification the Theory of Planned Behaviour Theory (AERTSENS, VERBEKE, MONDELAERS & VAN HUYLENBROECK, 2009), but as well as because they are irreplaceable for implementing marketing strategy of a company.

The results of domestic researches point out that functional food consumers in Serbia are younger and more educated than traditional food consumers (STOJANOVIĆ & BARJOLLE, 2012). The research of food with "health claims" market in Western Balkans countries (including Serbia) suggest that for manufacturers and retailers, the targeted market segments consist of consumers that are more educated, young, employed, with higher income, trying to live healthy lifestyle and that are women taking care about own appearance (STOJANOVIC, ZAOUCHE-LANIAU & ESTEVE, 2010). The same research emphasizes that according to opinion of experts, food with "health claims" consumers are young women having families, well informed persons, people trying to keep good health, have dynamic lifestyle and living in cities; while according to consumers' opinion, food with "health claims" consumers are young employed women, having average or above average income, taking care

about own appearance, mostly married and have children and who buy food once a week in supermarkets and follow trends in all life domains.

Having in mind previous researches, following hypotheses have been proposed:

- H1: In Serbia, there can be identified high-frequent food with "health claims" consumers' segments for all researched categories of this food.
- H2: High-frequent food with "health claims" consumers' segments for all researched categories of this food are statistically significantly different from low-frequent food with "health claims" consumers' segments by consisting of larger percent of women.
- H3: High-frequent food with "health claims" consumers' segments for all researched categories of this food are statistically significantly different from low-frequent food with "health claims" consumers' segments by consisting of consumers with lower mean age (younger consumers).
- H4: High-frequent food with "health claims" consumers' segments for all researched categories of this food are statistically significantly different from low-frequent food with "health claims" consumers' segments by consisting of consumers with higher mean rank of education (more high educated people).
- H5: High-frequent food with "health claims" consumers' segments for all researched categories of this food are statistically significantly different from low-frequent food with "health claims" consumers' segments by consisting of larger percent of married respondents.
- H6: High-frequent food with "health claims" consumers' segments for all researched categories of this food are statistically significantly different from low-frequent food with "health claims" consumers' segments by consisting of larger percent of consumers with children in their families.
- H7: High-frequent food with "health claims" consumers' segments for all researched categories of this food are statistically significantly different from low-frequent food with "health claims" consumers' segments by consisting of consumers with higher mean of their household size (consumers with larger households).
- H8: High-frequent food with "health claims" consumers' segments for all researched categories of this food are statistically significantly different from low-frequent food with "health claims" consumers' segments by consisting of consumers with higher mean of self-assessed household income (consumers with higher income).

### 3. Materials and Methods

The questionnaire consisted of two parts. In the first part, socio-demographic characteristics of respondents were collected: gender, age, education, marital status, presence of children in family, the size of the household and self-assessed household income (from 1 - the lowest, to 5 - the highest mark).

The second part of the questionnaire was designed in order to collect data regarding self-reported frequency of consumption of food with "health claims": low-fat food, low-sugar food, food enriched with vitamins and minerals and probiotics. The self-reported frequency of consumption was assessed at seven-point Likert scale, with meanings: level 1 - never, level 2 - once in several months, level 3 - once in several weeks, level 4 - once a week, level 5 - several times a week, level 6 - every day, level 7 - several times a day.

It took from 5 to 15 minutes for the respondents to fill in the whole questionnaire.

The respondents were chosen to be 18 to 65 years old. The total of 330 questionnaires was collected. The respondents were recruited in several larger towns of Serbia in May, 2013. In order to try to reach average food consumer in Serbia, the respondents were approached near green markets, large shopping centres and school/university centres. In the sample there were 33.6% of male (111 respondents) and 66.4% of female (219 respondents). The average respondent was 36.52 years old (standard deviation 12.941). As for respondents' education, 37.3% of them had finished secondary school, 19.4% of respondents were attending college or faculty and 43.3% had finished college or faculty. Regarding marital status, 47.3% of respondents were married and 52.7% were single, while regarding children, 48.2% of respondents lived in the same household with his/her child/children, while 51.8% did not. When considering the size of the household, 65 respondents lived in household of one, 62 with two, 86 with three, 83 with four and 34 with five members, while when evaluating household income, 12.7% marked it with 1, 32.4% with 2, 33.6%, with 3, 14.8% with 4 and 6.4% with 5.

Data analysis was conducted by using MS Office Excel and SPSS. After establishing the self-reported frequencies of consumption of various categories of food, the respondents were divided into low- and high-frequent consumers of each category of food. To low-frequent consumers segments of each category of food were classified respondents rating they consume that category of food never, once in several months or once in several weeks (1, 2

and 3). To high-frequent consumers segments of each category of food were classified respondents rating they consume that category of food once a week, several times a week, every day or several times a day (4, 5, 6 and 7).

Further analysis was conducted in order to investigate whether low- and high- frequent consumers segments of each category of food were statistically significantly different regarding chosen socio-demographic characteristics. Pearson Chi-Square test was used considering gender, marital status and the presence of children in family, Independent samples T-test was used regarding age, household size and self-assessed household income, while Mann-Whitney U test was used in relation to education.

#### 4. Results

Self-reported frequencies of consumption of low-fat food and low- and high-frequent consumers' segments derived from these data are shown in table 1.

**Table 1: Self-reported frequency of consumption of low-fat food and consumer segments**

Self-reported frequency of consumption of low-fat food	Frequency	%	Consumer segments	%
never	20	6.1	Low-frequent low-fat food consumers	52.4
once in several months	67	20.3		
once in several weeks	86	26.1		
once a week	72	21.8	High-frequent low-fat food consumers	47.6
several times a week	59	17.9		
every day	19	5.8		
several times a day	7	2.1		
Total	330	100.0		100.0

Source: Authors' analysis

As it can be seen from the table 1, larger percent of respondents belongs to low-fat food low-frequent consumers than to low-fat food high-frequent consumers. Hereby, 52.4% of respondents consume low-fat food less than once a week, belonging to low-frequent low-fat food consumers' segment. Out of that number 6.1% never consume this food. On the other hand, 47.6% of respondents consume this food at least once a week belonging to high-frequent consumers segment, whereas 7.9% consume it every day or several times a day. The largest percent of respondents – 26.1% consume this food once in several weeks, followed by 21.8% who consume this food once a week.

In table 2 are given results regarding self-reported frequencies of consumption of low-sugar food as well as percentage of respondents belonging to this food low- and high-frequent consumers' segments.

**Table 2: Self-reported frequency of consumption of low-sugar food and consumer segments**

Self-reported frequency of consumption of low-sugar food	Frequency	%	Consumer segments	%
never	30	9.1	Low-frequent low-sugar food consumers	57.0
once in several months	69	20.9		
once in several weeks	89	27.0		
once a week	60	18.2	High-frequent low-sugar food consumers	43.0
several times a week	63	19.1		
every day	16	4.8		
several times a day	3	0.9		
Total	330	100.0		

Source: Authors' analysis

Figures from table 2 confirm that as well as for low-fat food, in case of low-sugar food consumption, larger percent of respondents belongs to low-sugar food low-frequent consumers than to low-sugar food high-frequent consumers. The size of low-frequent consumers' segment is in this case even larger – 57% of respondents consume low-sugar food less than once a week, belonging to this segment, in comparison to 43% of respondents who consume this food at least once a week, belonging to low-sugar food high-frequent consumers' segment. When considering the least and the most frequent consumption of this food, it can be seen that even 9.1% of respondents never consume this food, whereas only 5.7% consume it every day or several times a day. The largest percent of respondents – 27% consume this food once in several weeks, the second largest percent 20.9% consume it once in several months, while the third largest percent of consumer – 19.1% consume this food several times a week, followed by 18.2% of respondents who consume it once a week.

Low-frequent and high-frequent food enriched with vitamins and minerals consumers' segments and self-reported frequencies of consumption of this food, from which these segments were derived, are given in table 3.

**Table 3: Self-reported frequency of consumption of food enriched with vitamins and minerals and consumer segments**

Self-reported frequency of consumption of food enriched with vitamins and minerals	Frequency	%	Consumer segments	%
never	20	6.1	Low-frequent food enriched with vitamins and minerals consumers	51.5
once in several months	63	19.1		
once in several weeks	87	26.4		
once a week	61	18.5	High-frequent food enriched with vitamins and minerals consumers	48.5
several times a week	60	18.2		
every day	32	9.7		
several times a day	7	2.1		
Total	330	100.0		

Source: Authors' analysis

In table 3 it can be seen that as in previous cases of consumption of food with "health claims", when it comes to food enriched with vitamins and minerals, the size of the high-frequent consumers' segment is smaller than the size of low-frequent consumers segment. Out of all respondents, 51.5% consume this food once in several weeks or less, thus belonging to low-frequent consumers' segment, while 48.5% consume it at least once a week, thus belonging to high-frequent consumers' segment. Within these figures, 6.1% never consume this food, while 11.8% consume it every day or several times a day. The largest percent of respondents - 26.4% consume this food once in several weeks, followed by 19.1% of respondents who consume it once in several months and 18.5% of respondents who consume it once a week.

In table 4 are shown self-reported frequencies of consumption of probiotics and sizes of two segments of probiotic consumers: low-frequent and high-frequent.

**Table 4: Self-reported frequency of consumption of probiotics and consumer segments**

Self-reported frequency of consumption of probiotics	Frequency	%	Consumer segments	%
never	70	21.2	Low-frequent probiotics consumers	63.3
once in several months	84	25.5		
once in several weeks	55	16.7		
once a week	42	12.7	High-frequent probiotics consumers	36.7
several times a week	42	12.7		
every day	34	10.3		
several times a day	3	0.9		
Total	330	100.0		

Source: Authors' analysis

According to figures in table 4, consumption of probiotics is characterized by the largest low-frequent consumers segment – 63.3% of the respondents consume it once in several week or less. The largest percent of respondents 25.5% consume it once in several months, followed by 21.2% of respondents who never consume it and 16.7% who consume it once in several weeks, all belonging to low-frequent consumers. On the other side, 36.7% of respondents present high-frequent probiotics consumers, whereas 11.2% consume it once a day or several times a day.

In following tables (table 5, table 6, table 7 and table 8) are presented socio-demographic characteristics of low- and high-frequent consumers' segment for each category of food within food with "health claims", respectively. After each of the tables are also given results of Pearson Chi-Square tests used regarding gender, marital status and the presence of children in family, Independent samples T-tests used considering age, household size and self-assessed household income and Mann-Whitney U tests used in relation to education. Since most of the comments of the results will be based on statistical significance, in table 9 will be shown for which of socio-demographic characteristics used within this research there are statistically significant differences between low- and high-frequent consumers' segments for each researched category of food with "health claims".

**Table 5: Socio-demographic characteristics of low-frequent low-fat food consumers and high-frequent low-fat food consumers**

Socio-demographic characteristics			Low-frequent consumers	High-frequent consumers
gender	male	%	38.2	28.7
	female	%	61.8	71.3
age		mean (SD)	33.97 (12.589)	39.32 (12.781)
marital status	single	%	59.0	54.1
	married	%	41.0	45.9
presence of children in family	family with no children	%	60.7	42.0
	family with children	%	39.3	58.0
household size		mean (SD)	2.75 (1.245)	3.02 (1.298)
education		median (mean rank)	2 (165.43)	2 (165.67)
self-assessed income	household	mean (SD)	2.64 (0.999)	2.76 (1.146)

Source: Authors' analysis

The results of Pearson Chi-Square test for gender are:  $\chi^2(df=1)=3.319$ ,  $p=0.068>0.05$ ; for marital status are:  $\chi^2(df=1)=5.666$ ,  $p=0.017<0.05$ ; and for presence of children in family are:  $\chi^2(df=1)=11.473$ ,  $p=0.001<0.05$ . The results of the Independent samples T-test for age are:  $t(df=328)=-3.826$ ,  $p=0.000<0.05$ ; for household size are:  $t(df=328)=-1.952$ ,  $p=0.052>0.05$ ; and for self-assessed household income are:  $t(df=328)=-0.985$ ,  $p=0.325>0.05$ . The results of Mann-Whitney U test was used regarding differences in respondents' education between low-frequent (Md=2, n=173) and high-frequent consumers (Md=2, n=157) are:  $Z=-0.014$ ,  $p=0.989>0.05$ .

**Table 6: Socio-demographic characteristics of low-frequent low-sugar food consumers and high-frequent low-sugar food consumers**

Socio-demographic characteristics			Low-frequent consumers	High-frequent consumers
gender	male	%	36.7	29.6
	female	%	63.3	70.4
age		mean (SD)	34.22 (12.377)	39.55 (13.088)
marital status	single	%	57.4	46.5
	married	%	42.6	53.5
presence of children in family	family with no children	%	58.5	43.0
	family with children	%	41.5	57.0
household size		mean (SD)	2.76 (1.251)	3.04 (1.296)
education		median (mean rank)	2 (164.96)	2 (166.21)
self-assessed household income		mean (SD)	2.63 (1.018)	2.79 (1.135)

Source: Authors' analysis

The results of Pearson Chi-Square test for gender are:  $\chi^2(df=1)=1.840$ ,  $p=0.175>0.05$ ; for marital status are:  $\chi^2(df=1)=3.904$ ,  $p=0.048<0.05$ ; and for presence of children in family are:  $\chi^2(df=1)=7.838$ ,  $p=0.005<0.05$ . The results of the Independent samples T-test for age are:  $t(df=328)=-3.776$ ,  $p=0.000<0.05$ ; for household size are:  $t(df=328)=-1.981$ ,  $p=0.048<0.05$ ; and for self-assessed household income are:  $t(df=328)=-1.351$ ,  $p=0.177>0.05$ . The results of Mann-Whitney U test was used regarding differences in respondents' education between low-frequent consumers (Md=2, n=188) and high-frequent consumers (Md=2, n=142) are:  $Z=-0.128$ ,  $p=0.898>0.05$ .

**Table 7: Socio-demographic characteristics of low- and high-frequent food enriched with vitamins and minerals consumers**

Socio-demographic characteristics			Low-frequent consumers	High-frequent consumers
gender	male	%	41.8	25.0
	female	%	58.2	75.0
age		mean (SD)	33.98 (12.195)	39.21 (13.202)
marital status	single	%	58.2	46.9
	married	%	41.8	53.1
presence of children in family	family with no children	%	58.8	44.4
	family with children	%	41.2	55.6
household size		mean (SD)	2.85 (1.287)	2.91 (1.268)
education		median (mean rank)	2 (162.62)	2 (168.56)
self-assessed household income		mean (SD)	2.64 (0.959)	2.76 (1.179)

Source: Authors' analysis

The results of Pearson Chi-Square test for gender are:  $\chi^2(df=1)=10.378$ ,  $p=0.001<0.05$ ; for marital status are:  $\chi^2(df=1)=4.268$ ,  $p=0.039<0.05$ ; and for presence of children in family are:  $\chi^2(df=1)=6.892$ ,  $p=0.009<0.05$ . The results of the Independent samples T-test for age are:  $t(df=328)=-3.736$ ,  $p=0.000<0.05$ ; for household size are:  $t(df=328)=-0.421$ ,  $p=0.674>0.05$ ; and for self-assessed household income are:  $t(df=328)=-1.078$ ,  $p=0.282>0.05$ . The results of Mann-Whitney U test was used regarding differences in respondents' education between low-frequent consumers ( $Md=2$ ,  $n=170$ ) and high-frequent consumers ( $Md=2$ ,  $n=160$ ) are:  $Z=-1.078$ ,  $p=0.282>0.05$ .

**Table 8: Socio-demographic characteristics of low-frequent probiotics consumers and high-frequent probiotics consumers**

Socio-demographic characteristics			Low-frequent consumers	High-frequent consumers
gender	male	%	36.8	28.1
	female	%	63.2	71.9
age		mean (SD)	35.69 (13.124)	37.93 (12.544)
marital status	single	%	55.0	48.8
	married	%	45.0	51.2
presence of children in family	family with no children	%	53.1	49.6
	family with children	%	46.9	50.4
household size		mean (SD)	2.93 (1.229)	2.79 (1.355)
education		median (mean rank)	2 (166.52)	2 (163.74)
self-assessed household income		mean (SD)	2.65 (0.955)	2.79 (1.246)

Source: Authors' analysis

The results of Pearson Chi-Square test for gender are:  $\chi^2(df=1)=2.624$ ,  $p=0.105>0.05$ ; for marital status are:  $\chi^2(df=1)=1.206$ ,  $p=0.272>0.05$ ; and for presence of children in family are:  $\chi^2(df=1)=0.381$ ,  $p=0.537>0.05$ . The results of the Independent samples T-test for age are:  $t(df=328)=-1.518$ ,  $p=0.130>0.05$ ; for household size are:  $t(df=328)=0.956$ ,  $p=0.340>0.05$ ; and for self-assessed household income are:  $t(df=328)=-1.061$ ,  $p=0.290>0.05$ . The results of Mann-Whitney U test was used regarding differences in respondents' education between low-frequent consumers ( $Md=2$ ,  $n=209$ ) and high-frequent consumers ( $Md=2$ ,  $n=121$ ) are:  $Z=-0.274$ ,  $p=0.784>0.05$ .

As already stated, table 9 reports the existence of statistical significant differences regarding socio-demographic characteristics between low- and high-frequent consumers' segments for each researched category of food with "health claims". The existence of these differences is marked with "+" within this table.

**Table 9: Statistical significant differences for socio-demographic variables between low- and high-frequent consumers' segments for researched categories of food with "health claims"**

Socio-demographic characteristics	Existence of statistical significant differences between low- and high-frequent consumers			
	low-fat food segments	low-sugar food segments	food enriched with vitamins and minerals segments	probiotics segments
gender			+	
age	+	+	+	
marital status	+	+	+	
presence of children in family	+	+	+	
household size		+		
education				
self-assessed household income				

Source: Authors' research

According to socio-demographic descriptions of low- and high-frequent consumers for each category of food with "health claims" and the existence of statistically significant differences between these consumers, profile of high-frequent consumers for each category can be established. High-frequent low-fat food consumers are older, more of them are married and live with children in their families in comparison to low-frequent low-fat food consumers. When it comes to high-frequent low-sugar food consumers, it can be seen that they are older, more of them are married, live with children in their families and their households are larger in comparison to low-frequent low-sugar food consumers. As for the high-frequent food enriched with vitamins and minerals consumers, it can be concluded that there is larger percent of women among them and that they are older, more of them are married and live with children in their families in comparison to low-frequent food enriched with vitamins and minerals consumers. When considering probiotics, there are no statistically significant differences regarding chosen socio-demographic characteristics between high-frequent consumers and low-frequent consumers.

## 5. Discussion and recommendations

Out of all hypotheses, only the first one is completely confirmed. It means that for all researched categories within food with "health claims" (presented by low-fat food, low-sugar food, food enriched with vitamins and minerals as well as probiotics) there can be identified

both, high- and low-frequent consumers' segments. This result suggests that for each of these food, there are respondents who consume it at least once a week, belonging to high-frequent consumers. However, for all these food greater number of respondents belongs to low-frequent consumers' segments than to high-frequent consumer segments. The results are confirming the fact that these foods' markets are emerging in Serbia. Hereby, the largest low-frequent consumers' segment is registered for probiotics. This is not in accordance with some other researches suggesting that according to producers' information, milk products with "health claims", to which most of the probiotics refer, actually dominate on domestic food with "health claims" market (STOJANOVIC, ZAUCHE-LANIAU & ESTEVE, 2010). An explanation could be that probiotics, being well present in domestic distribution channels, are being bought without the actual knowledge of consumers who do not buy these products as probiotics but only as milk products. To this can also be added that although self-reported frequency of food consumption is often used as measure of actual food consumption (eg. ROININEN & TUORILA, 1999; DE JONG, OCKÉ, BRANDERHORST & FRIELE, 2003), this situation can present an example of its disadvantage. That has also been manifested, for example, regarding part of organic food bought in England, whereas this food, once more present in distribution channels, was bought without consumers' knowledge (ANNON, 2004).

All other hypotheses, as already stated, have not been fully confirmed. There are statistical significant differences between high- and low-frequent consumers' segments of one category of food with "health claims" (food enriched with vitamins and minerals) regarding gender, three categories (low-fat food, low-sugar food and food enriched with vitamins and minerals) regarding marital status and presence of children in family, and one category (low-sugar food) regarding household size. As for the consumers' age, these differences exist within three categories of food – low-fat food, low-sugar food and food enriched with vitamins and minerals. However, these differences are not as expected since high-frequent consumers of these categories of food are actually older than low-frequent consumers. Regarding self-assessed household income and education there are no statistically significant differences between high- and low- frequent consumers' segments. Generally, when searching for common characteristics of all Serbian food with "health claims" high-frequent consumers' profile (with exception of probiotics), it can be concluded that they are older, more of them are married and have children in comparison to low-frequent consumers.

Nevertheless, if we consider the results from broader perspective by comparing segments regarding all their descriptors, not only those where statistically significant

differences exist, it can be seen that most of the expectations formulated in hypotheses are fulfilled. The exceptions are household size and education for probiotics (but although opposite from expected differences regarding these criteria between segments are minor) and for the age in general. Fulfilling expectations from hypothesis but with lack of statistically significant differences in all cases, can be also analysed in the context of the structure of the sample since more educated and younger consumers were more willing to participate. Having that in mind, the differences with some previous researches emphasizing these food consumers to be younger (STOJANOVIC, ZAOUCHE-LANIAU & ESTEVE, 2010; STOJANOVIĆ & BARJOLLE, 2012) can be explained since older high-frequent consumers in this research are actually between 37 and 39 years old in average. Besides, some of previous researches rely on respondents' attitudes or experts' or producers' evaluations of consumers' profile.

Having in mind the similarity of high-frequent consumers' segments for all categories of food and the fact that most of this food belongs to domestic brands, whereas a number of these brands were familiar to consumers in times when these brands had no "health claims" offer at all, the joint recommendations for promotion in order to target this segment will be given. At the same time by considering their profile and food with "health claims" market brands structure, it can be expected that high-frequent consumers (older, more of them married and more having children in comparison to low-frequent consumers) in these days are not only trying to protect health by using this food, but are also attempting to stay in touch with tradition and previous times. Therefore, the communication arguments to be used in promotion should suggest both.

These products' visual identity should resemble to visual identity from past but ought to be modernized as well. Since a lot of these products are bought on daily basis, they should be widely distributed. Advertising should be performed on national television before reprise of old domestic TV serials, which can evoke nostalgia as well, usually watched by the whole family in every working days' evening.

Sales promotions should be organized in order to stimulate consumers to taste these food with emphasizing that there are no great differences in comparison to familiar tastes of these brands from times without their "health claims" offer. Brochures about food with "health claims" should be given to consumers in order to educate them about the significance of such food for the health. Marketing public relations should provide results of researches confirming food with "health claims" being beneficial for health and deliver them to journals

and/or televisions. Journalists could also be invited periodically to companies producers of this food in order to learn more and to taste this food as well. Medical workers or sport trainers should be motivated and encouraged to inform the audience about advantages of food with "health claims" during TV programmes in which they are guests. Sponsorships of sport events could also be in function of promotion.

## **6. Conclusions**

In this paper was described the research conducted in Serbia in May, 2013, in which profile of low- and high-frequent consumers of several categories of food with "health claims" was explored in context of their socio-demographic characteristics. For all categories of food with "health claims" greater number of respondents belongs to low-frequent consumer segments than to high-frequent consumer segments. The strongest predictor of food consumption (except for probiotics) were consumers' age, marital status and presence of children in family, while the weakest consumers' self assessed household income and education. Generally, common characteristics of all Serbia food with "health claims" high-frequent consumers' profile (with exception of probiotics) in comparison to low-frequent consumers' profile are that they are older, married and have children.

Having in mind the results of conducted marketing research, implications on promotion of food companies operating in domestic food market were considered. Promotion mix was proposed for food with "health claims" of already familiar brands with communication argument that this food can offer connection to old times and way to improve health. It was suggested for targeting high-frequent consumers since this market is still emerging. Although introducing new food brands would require much greater efforts, results of this research could also be useful for their promotion as well as for whole marketing mix creation and implementation. In addition, the results can be significant for companies engaged at supply side of this food market to attempt to obtain loyal consumers thus decreasing their costs.

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