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Gluten-free Products and Zagreb's Bakeries

By

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A Capstone Project Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Science in Service Leadership and
Innovation

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Abstract

While a capital of Croatia, with a population of over one million, offers a limited number of different gluten-free products, Zagreb's bakeries do not offer gluten-free products at all.

The purpose of this study was to identify the existence of a non-medically motivated demand for gluten-free products in Zagreb's bakeries and find out what are the motivators driving this demand. This study used an explanatory sequential mixed methods design. Quantitative data collection (through a survey) was followed with a qualitative data collection and analysis (through interviews) which led to the interpretation of results.

Survey was conducted on a random sample of 70 respondents, while a qualitative research was conducted by using 10 face-to face semi-structured interviews with individuals who are citizens of Zagreb and who answered positively about buying gluten-free products in Zagreb's bakeries. The data suggests that a non-medically motivated demand for gluten-free products in Zagreb's bakeries exist and that main motivators driving this demand are: initiative to try something new and interest in a different ('healthier') lifestyle.

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Introduction

A growing number of Americans follow a gluten-free diet simply because they believe it will help with digestive issues, skin, respiratory problems, weight loss and general health (McVean, 2013). Whether the reason behind the rise of global gluten-free sale is just good marketing, trend, or real health issues, 'being gluten free has become a health phenomenon' (Buser, 2013). As more and more people are deciding to give up gluten whether or not they actually have to (Buser, 2013), situation in Croatia is changing as well.

World famous Serbian tennis player Novak Đoković in 2013 published a book about his lifestyle and changes he made in order to become a champion. In his book titled 'Serve to win: the 14-day gluten free plan for physical and mental excellence' he explains why he stopped eating gluten, and how this decision changed his life and health for the better. Book was also published in Croatia and very soon became a bestseller. In the same year, Croatian nutritionist Anita Šupe published a book 'First Croatian LCHF Cookbook' where she describes how to cook without gluten, additives and vegetable oils. Her book has numerous recipes, including those for gluten-free bread, pasta, cakes, etc.

Although more than 70% of people who are avoiding gluten have not been diagnosed with coeliac disease (Dickerson, 2012), trend is on the rise, and satisfaction with available gluten-free products is questionable. A capital of Croatia with a population of over one million, offers a limited number of different gluten-free products. Zagreb's bakeries do not offer gluten-free products at all.

Purpose statement

The growing embracement of a gluten-free diet, lately advocated by numerous health experts and celebrities, has recently been often presented through Croatian and global media as the only right and healthy way of eating. Globally speaking, "in 2010, global gluten free sales totaled \$2.5 billion, a figure that more than doubled by 2012" (Cross, 2013).

Despite the global trends, Zagreb, a capital of Croatia with a population of over one million, offers a limited number of different gluten-free products. Based on the personal observation, the gluten free offer is limited to several expensive products that can be bought at specialized food shops or big shopping centers. All these products are permanent products, designed to last for days, such as pasta or cookies in a box. At the same time, bakeries with wide offer of daily fresh wheat products can be found at every corner of the city. Surprisingly, the total number of gluten-free products that can be found in all bakeries of Zagreb is zero!

The purpose of this study is to identify the existence of non-medically motivated demand for gluten-free products in Zagreb's bakeries and to find out what are the motivators driving this demand. This study will search for the answers to the following important questions: Would Zagreb's citizens want to buy gluten-free products in Zagreb's bakeries? Why would they want to buy them?

Literature Review

Several studies and articles have been categorized here to establish the possible increase in demand for gluten-free products in Croatia, a global gluten-free sale, motivators behind this global trend, health reasons and the question of scientific consensus regarding the growing global embracement of the gluten-free diet.

Possible increase in demand for gluten-free products in Croatia

After famous tennis player Đoković (2013) published a book about his gluten-free diet, issue of gluten free food became more known to average Croatian citizens. After his book was sold out in Croatia in 2013, several of Zagreb's restaurants introduced 'gluten-free menu'. The book stresses negative influence of gluten diet in general, and promotes gluten-free lifestyle as the only lifestyle that results in physical and mental health.

Šupe & Miljenić (2013) address the issue of cooking gluten-free food, with the emphasis on baking gluten-free bread, pizza and cakes. This is one of the first 'gluten-free' cookbooks published in Croatia that also promotes 'gluten-free' lifestyle and health benefits of such eating habits.

University of Zagreb, Faculty for food and biotechnology, published a study (Bituh et al., 2011) that deals with the problem of gluten-free food and vitamins deficiency. As the study concludes that vitamin enrichment of gluten-free products could be beneficial both for coeliac patients and the food industry, study is also important because research was conducted in Croatia on Croatian patients. This shows that the issue of gluten-free food is known in Croatia, and that a general a demand for such products exists.

A global gluten-free sale: food industry faces new demands

Demand for gluten-free products is on the rise globally. MacVean (2013) writes that for the estimated 3 million Americans with coeliac disease, a single bite of food with gluten can cause gastrointestinal distress. The author also writes that a growing number of Americans are following gluten-free diet simply because they believe it will help with digestive issues, skin and respiratory problems, weight loss and general health. MacVean (2013) also suggest that as FDA sets standards on gluten-free claims, the vast majority of beneficiaries will be those who have embraced a gluten-free lifestyle without an official medical diagnosis.

Cavanagh (2013) conducted a study titled: "Consumer satisfaction with gluten free yeast raised doughnuts for commercial production". The author states that diagnosis of celiac disease is on the rise, as are the number of consumers choosing a gluten-free diet. His research is about new food options for those who suffer from celiac disease. Cavanagh concludes that despite trends, baking industry as of 2012 has not addressed the need for a gluten-free yeast-raised doughnut.

As for the marketing and prices, Cross (2013) writes that in 2010, global gluten-free sales totaled \$2.5 billion, and by 2012 that figure doubled. The author points that Canada even has a marketing agency devoted entirely to businesses with gluten-free products. Gluten-free products are usually more expensive and have a limited availability; however, the sale is on the rise.

Singh and Whelan (2011) write for Journal of Human Nutrition and Dietetics that there is a limited availability and higher cost of gluten-free foods. Since this kind of food is generally more expensive than their standard counterparts, Singh and Whelan conclude that it may impact on compliance to a gluten-free diet, with potential nutritional and clinical consequences.

Food allergies and food industry are usually interconnected. In his study, Payne (2011) writes about the prevalence of food allergies which doubled between 1985 and 2005. Payne argues that the labeling laws and food safety programs focus on the presence of the eight allergenic food types: egg, dairy, fish, wheat, shellfish, tree-nuts, soy and peanuts. His study is important because he warns that the food processors must understand the extent of the consequences of consumer exposure to food hazards.

"Gluten free-for-all" (2011) published by Nutrition Action Health Letter opens the important question whether we can trust declarations? Anonymous author is trying to define a gluten-free food and offers definition that U.S. Food and Drug Administration proposed in 2007, but claims that FDA never finalized the rule, so that there is no guarantee that "gluten free" claims are honest.

In addition, He (1989) writes about "Development of theories to explain flour baking quality" and offers valuable data on what is happening to gluten during the baking process.

The issue of contamination and potential health risks is something that each country should address with responsibility. "Heavy metals in wheat grain and assessment of potential health risk for inhabitants in China" is a study conducted by Huang, Zhou, Sun, & Zhao (2008). Authors of this study write that heavy metals may cause deleterious effects on human health due to the ingestion of food grain grown in contaminated soils. This study opens the question of correlation between food contamination and new trends in nutrition and economy.

In the study titled "The value of gluten-free attributes in snack foods", Sampson (2010) states that the results of this research show that the "gluten-free attribute is both economically and statistically significant, implying a premium of nearly \$1.86 above gluten-containing products" (Sampson, 2010). The author writes that while the entire gluten-free industry has been

experiencing double digit growth rates, the expansion in available snack foods has outstripped all others.

A global trend: motivators

Demand for gluten-free products is growing globally and "most industry observers believe the gluten-free trend has staying power" (Ward, 2011, p.48). The anonymous author wonders why is gluten-free a \$6.1 billion industry? According to Solan (2011), sales of gluten-free products grew about 30 percent a year from 2006 to 2010.

Why do people believe gluten-free diet is a healthier choice? Solan (2011) writes how avoiding gluten has become a big business. In an attempt to understand reasons behind sudden gluten-free trend, the author is trying to answer: What is gluten, anyway? How does it affect the body? Should I avoid eating gluten even if I do not have problems with it? Avoid gluten and you avoid refined carbs; Is that the weight-loss secret? Although "mainstream research still hasn't substantiated the claims of those who believe gluten is bad for everyone" (Solan, 2011, p.80), author concludes how many individuals follow gluten-free diet because they believe this diet will help them lose weight and gain more energy. Solan (2011) does not provide an answer to whether we should avoid gluten or not. It is left up to readers to conclude what they believe in, while Solan (2011) simply presents both sides of the story: athletes, physiologist, and dietitian who claim gluten-free diet is beneficial, and nutritionist who claims how gluten-free can actually lead to a weight gain because it all depends on our lifestyle and calorie intake. Buser (2013) states that since the publication of Dr. William Davis' "Wheat Belly" and endorsements from celebrities like Miley Cyrus, being gluten free has become a health phenomenon. The author

writes how more and more people are deciding to give up gluten whether or not they actually have to.

Important question is who should actually follow a gluten-free diet? Everyone, or only those with medical reasons? "Can gluten-free make you skinny" (2012) explains how a gluten-free diet used to be only recommended for those with coeliac disease, but how according to the University of Chicago Celiac Disease Center, this is only about 1 percent of Americans. Dickerson (2012) reports how more than 70% of people who are avoiding gluten have not been diagnosed with coeliac disease. Rogers (2003) addresses the issue of coeliac disease, gluten free diet, gluten contamination as well as the social aspect of "eating in" and "eating out". In an article published by "Alternative Medicine", Spacher (2013) strongly advocates gluten free diet and is advising that one should speak with their doctor about trying a gluten-free diet in case of digestive issues, autoimmune disease, chronic pain, or symptoms that a professional has not been able to diagnose. Author is arguing that "millions of people are affected by gluten and do not realize it, so it is important to understand how gluten is digested in those with any degree of gluten intolerance" (Spacher, 2013). Tufts University Health & Nutrition Letter (2013) published an article titled "Time for a reality check on going gluten-free", describing how most people who are "gluten-free" do not actually have coeliac disease and if a person does not have a scientifically valid reason, he/she should not deprive himself/herself of the pleasures and nutrition of consuming moderate amounts of wheat, barley and rye, especially in their whole-grain forms. As pointed out by Ungar (2013), it is very difficult to know if you have "Non-Celiac Gluten Sensitivity" because according to the National Foundation for Celiac Awareness, research on that condition is in its infancy.

Health issues and reasons

Is there a scientific consensus about this issue? Three years ago, Millman (2011) wrote that according to the Nielsen Co., gluten-free products are projected to become a \$2.6 billion industry by 2012. The author writes that gluten-sensitivity has also been associated with other conditions, including irritable bowel syndrome, attention deficit disorder and autism. However, Millman points that there is not a scientific consensus on whether removing gluten from the diet alleviates symptoms for any of these disorders.

Perlmutter and Vojdani (2013) conducted a study titled "Association between headache and sensitivities to gluten and dairy". Perlmutter and Vojdani (2013) argue how dietary factors are known triggers for migraine headaches and how the most commonly implicated foods are wheat and dairy products. They presented a case study of a patient with a 30-year history of debilitating migraine headaches that showed no benefit from various pharmaceutical interventions. Authors conclude that "it has been demonstrated that individuals may develop autoimmune injury to the gut, skin, brain, joints, liver, thyroid, bone, reproductive organs, and other parts of the body if gluten and dairy sensitivity are left untreated" (Perlmutter and Vojdani, 2013, p. 43).

Another important question is the issue of gluten sensitivity and symptoms. As a conclusion of his study, Buie (2013) writes that there may be a subgroup of patients who might benefit from a gluten-free diet, but the symptom or testing profile of these candidates still remains unclear.

Burd (2002) conducted a quantitative study with the goal of determining prevalence of nutritional inadequacy among adult males aged 19-70 with celiac disease following a gluten-free diet. Although the results of this study showed no prevalence of inadequacy for some vitamins, the author argues that literature concerning the nutritional adequacy of the gluten free diet is conflicting.

Carlsson (2001) conducted a study which offers valuable information regarding gluten intake and child health conditions. He also makes connection with children with Down's syndrome and undiagnosed coeliac disease.

Devlin (2013) writes that gluten-free diets have gained popularity in recent years among healthy individuals. He also claims that gluten-free foods are typically lower in essential nutrients and his study offers valuable information regarding nutrition intakes of a gluten free diet.

Leibrock (2011) conducted a study on "Autism and the gluten- and casein-free diet as a treatment for children with autism". Since there is no known cure for ASDs at this time, the author concludes how many parents of children with ASDs are turning to complementary and alternative medicine and one of the more popular of these is the gluten-free diet.

Smith (2009) tried to identify coping strategies, and to examine the relationship between coping strategies and quality of life. Results from the study indicated problems in eating outside of home and factors that interfere with dietary adherence.

Winkler (1990) conducted a study titled "Gluten sensitivity as a possible potentiator of or contributor to gallbladder disease among mexican-americans". The author discusses gluten sensitivity as a contributor to or promoter of gallbladder disease that can be generalized to Native American. Study gives valuable information about gluten sensitivity.

On the other hand, Dalton, Tapsell, & Probst (2012) wrote an article on potential health benefits of whole grain wheat components. Contrary to studies previously presented, the authors write that whole grain foods are associated with reduced risk of several chronic diet-related diseases. The article provides an overview of the major components in whole grain wheat and reviews their associated health benefits.

Stevenson, Phillips, O'sullivan, & Walton (2012) reviewed the physiological effects of wheat bran and the health benefits in terms of the prevention of diseases such as colon and breast cancers, cardiovascular disease, obesity and gastrointestinal diseases.

Description of research methods

The purpose of this mixed methods study is to identify the existence of a non-medically motivated demand for gluten-free products in Zagreb's bakeries and if so, to find out what are the motivators driving this demand. This study used an explanatory sequential mixed methods design. Quantitative data collection (through a survey) is followed with qualitative data collection and analysis (through interviews) leading to the interpretation of results. In other words, this study is a two-phase study where one phase builds on the other.

Survey

Survey is designed to test the hypothesis that 'there is a non-medically motivated demand for gluten-free products in Zagreb's bakeries'.

In the first phase, a survey using a random sample was conducted in order to answer one quantitative research question asked in the Croatian language ('If your bakery introduced gluten-free products, would you be interested in buying them?') of whether there is a demand for gluten-free products in Zagreb's bakeries. For the purpose of this survey, 70 individuals were randomly selected among Zagreb's citizens. Respondents were chosen among citizens walking on Zagreb's streets.

For the purpose of this study, age and gender of respondents is not relevant. Data was collected during December 2014. The form of data collection was in person. Response format was face to face. (Appendix A).

Interviews

In second phase, and in order to understand the reason behind gluten-free product demand, qualitative research was conducted by using semi-structured interviews with open-ended questions (Appendix B). 10 face-to face interviews were conducted with individuals who are citizens of Zagreb and who answered positively about buying gluten-free products in Zagreb's bakeries.

Results

Survey

70 individuals, who were randomly selected among Zagreb's citizens during December 2014, answered the survey question the following way:

22 respondents (31, 4%) answered YES

48 respondents (68, 5%) answered NO

Interviews

After 10 face-to face interviews were conducted with individuals who answered positively about buying gluten-free products in Zagreb's bakeries (Appendix C presents the transcript of interviews), it can be concluded how main reasons for interest in buying gluten-free products are: a choice of different kind of products (2 respondents), trying something new (5 respondents), and general interest in gluten free diet (3 respondents). According to answers, gluten-free products are becoming more popular globally because people are becoming more aware of health issues connected with gluten diet; healthy lifestyle without consumption of gluten; food industry and marketing of gluten-free products.

All respondents first heard about gluten-free products from non-scholarly and unofficial sources such as: woman magazines, work place, various online articles, colleagues, friends, family member, and media. This leads to a conclusion how all respondents could decide to buy a gluten-free product based on unofficial and non-scholarly sources of information.

Two respondents are planning to follow a gluten-free diet. Five respondents are following gluten-free diet occasionally, and three respondents are not following gluten-free diet at all.

One respondent answered wheat products should be completely avoided; four respondents believe they should be occasionally avoided, four believe they should not be avoided at all, and one respondent is not sure whether wheat products should be avoided or not. This leads to a conclusion that about 50% of respondents believes gluten-product should be avoided occasionally. At the same time, seven respondents are not baking their own gluten-free bread, which can lead to a conclusion that they usually buy their bread. One respondent is baking its own gluten-free bread. Two respondents tried to bake their own gluten-free bread, which can show their willingness to eat gluten-free bread even if they do not buy it.

All ten respondents answered how they would like to see gluten-free products in Zagreb's bakeries. Respondents believe more surveys and studies should be done on the subject of gluten-free products, but at the same time, they believe that gluten awareness should be increased. It can be concluded how 90% of respondents is interested in seeing gluten-free products in their bakeries. 10% of respondents do not care about issue of limited number of gluten-free products in Zagreb.

Interesting point from the interviews is an answer of one male respondent (42) who 'would be interested in buying gluten-free products 'if the price will not be very high' and how 'it will depend on the price'. In his response, he is referring to future action, which could lead to a conclusion how he, in the future, expects to see gluten-free products in Zagreb's bakeries, as something that is going to happen.

Several respondents said they would be interested in testing how eating and avoiding gluten affects their bodies, which can suggest a desire to make changes in their diet.

In order to gain more knowledge about this subject, there are new questions that need to be asked: what is the percentage of Zagreb's citizens who would be interested in buying gluten-free products in Zagreb's bakeries? Would they be interested in buying them once, occasionally, or always? What kind of products would they prefer (bread, pastry...)?

Conclusion

The purpose of this mixed methods study was to identify the existence of a non-medically motivated demand for gluten-free products in Zagreb's bakeries and if so, to find out what are the motivators driving this demand.

Survey, designed to test the hypothesis that 'there is a non-medically motivated demand for gluten-free products in Zagreb's bakeries', resulted with 22 respondents (31, 4%) answering they would be interested in buying gluten-free products in Zagreb's bakeries.

A qualitative research followed by using semi-structured interviews with open-ended questions, where ten citizens of Zagreb explained why they would be interested in buying gluten-free products in Zagreb's bakeries, why they think gluten-free is becoming more popular globally, where they first heard about gluten-free products, are they already following gluten-free diet, do they believe gluten should be avoided, do they make their own gluten-free bread and how do they feel about Zagreb's offer of gluten-free products.

The data suggests that a non-medically motivated demand for gluten-free products in Zagreb's bakeries exist and that main motivators driving this demand are: initiative to try something new and interest in a different ('healthier') lifestyle.

While demand for gluten-free products is growing globally and "most industry observers believe the gluten-free trend has staying power" (Ward, 2011, p.48), it can be concluded how 90% of interview respondents is interested in seeing gluten-free products in their bakeries.

Data suggests that respondents first heard about gluten-free products from non-scholarly and unofficial sources of information, which leads to a conclusion how all respondents could decide to buy a gluten-free product based only on unofficial and non-scholarly sources of information.

Although "mainstream research still hasn't substantiated the claims of those who believe gluten is bad for everyone" (Solan, 2011, p.80), presented data suggests that respondents believe more surveys and studies should be done on the subject of gluten-free products.

Recommendations

Recommendations for further research include the following: possible increase in demand for gluten-free products in Croatia, specific types of gluten-free products needed or demanded in Croatia, Zagreb's bakeries positions and opinion regarding gluten-free products, new demands Croatian food industry faces and a customer profile research.

Further research is still required in the area of: a global gluten-free sale in general, motivators driving global gluten-free trend, scientific findings regarding the growing global embracement of the gluten-free diet, and the question whether gluten-free diet is a healthier food choice or not.

Limitations of the study

Bias that researcher may bring to this study is the fact that researcher personally knows three interview respondents (Damir, Mirjana and Dubravka), as they are researcher's neighbors.

Sample size may be inadequate on either quantitative or qualitative side of the study.

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APPENDIX A

Sample survey

Survey Topic: Gluten-free product in Zagreb's bakeries

Question:

If your bakery (in Zagreb) introduced gluten-free products, would you be interested in buying them? Please answer:

YES or NO

APPENDIX B

Sample questions for Interview

Question 1:

If Zagreb's bakeries introduced gluten-free products, you answered you would be interested in buying them. Why?

Question 2:

Why do you think gluten-free products are becoming more popular globally?

Question 3:

Where did you first hear about gluten-free products?

Question 4:

Are you already following a complete gluten-free diet or are you just trying to avoid gluten occasionally?

Question 5:

Do you believe wheat products should be completely avoided and if yes, why?

Question 6:

Do you make your own gluten-free bread?

Question 7:

Despite the global trends, Zagreb, a capital of Croatia with a population of over one million, offers a limited number of different gluten-free products. How do you feel about that and how would you change that?

APPENDIX C

Interviews with 10 respondents

Interview with Mr. Damir (36), from December 27, 2014

Question 1:

If Zagreb's bakeries introduced gluten-free products, you answered you would be interested in buying them. Why?

I would like to have a choice of different kind of products, and preferably food that is healthier. So, it will be convenient that when you come to buy ordinary things, like bread or some other pastry, that you also have at this place gluten free products.

Question 2:

Why do you think gluten-free products are becoming more popular globally?

Because people are more aware of what is going on around health issues connected with gluten. People heard that there are some potential problems with gluten – so people would like to try and test if there will be any difference for their health if they would eat gluten free products. I think that people are in general interested in their health and therefore in gluten free products.

Question 3:

Where did you first hear about gluten-free products?

I read about it in some article in some magazine. But I saw this kind of products in grocery stores, at least few products that had a label 'gluten free'. I also heard about people who have celiac disease, and I know that they are using gluten free products.

Question 4:

Are you already following a complete gluten-free diet or are you just trying to avoid gluten occasionally?

Honestly, I am not following gluten free diet and I am not trying to buy gluten free products. I luckily don't have health issues, but I would like to avoid gluten products occasionally or often if possible. This is just a plan for the future. If I would have a choice in bakeries, I would do it.

Question 5:

Do you believe wheat products should be completely avoided and if yes, why?

I don't think they should be completely avoided because we need all kinds of food, including wheat, but probably in some aspects we could exclude gluten products from our diet.

Question 6:

Do you make your own gluten-free bread?

No. I have tried gluten free bread from a friend, but I don't make my own at home.

Question 7:

Despite the global trends, Zagreb, a capital of Croatia with a population of over one million, offers a limited number of different gluten-free products. How do you feel about that and how would you change that?

I would like to see more options for gluten free products; because I think only a small percentage of food available in grocery stores is without gluten. I would try to raise the consciousness of people and awareness in society that there are some issues with gluten and with certain types of food. Probably some kind of surveys could help groceries and bakeries introduce more gluten free products. More marketing, surveys or studies could confirm that gluten free products have something beneficial for people. If Zagreb bakeries introduced gluten free products, they would have another choice for people that would be interested in them. I know that people who are trying to get gluten free products have to go around and search for them. It would be really positive if gluten free products could be found in ordinary bakeries.

Interview with Ms. Željka (35), from December 27, 2014

Question 1:

If Zagreb's bakeries introduced gluten-free products, you answered you would be interested in buying them. Why?

Because I would like to try them.

Question 2:

Why do you think gluten-free products are becoming more popular globally?

Because many people are allergic to gluten, even if they don't know about it. People are becoming more aware of this problem, and are trying food without gluten so that they could feel better.

Question 3:

Where did you first hear about gluten-free products?

At work. Because we have a child with gluten problem, and he only eats gluten free food.

I heard about it from child's parents.

Question 4:

Are you already following a complete gluten-free diet or are you just trying to avoid gluten occasionally?

I am trying to avoid it occasionally

Question 5:

Do you believe wheat products should be completely avoided and if yes, why?

No. I don't believe.

Question 6:

Do you make your own gluten-free bread?

No.

Question 7:

Despite the global trends, Zagreb, a capital of Croatia with a population of over one million, offers a limited number of different gluten-free products. How do you feel about that and how would you change that?

I would change it in way to add more gluten free products in stores. I would like to see gluten free products in bakeries because I think people need it.

Interview with Ms. Dubravka (26), from December 27, 2014

Question 1:

If Zagreb's bakeries introduced gluten-free products, you answered you would be interested in buying them. Why?

Yes I would, because I am interested in gluten free diet.

Question 2:

Why do you think gluten-free products are becoming more popular globally?

Because the wheat is changing its structure and is becoming more dangerous to our gut system and more and more people are aware that they have to change their diet and the way they eat. So gluten free products are a great substitute for bread.

Question 3:

Where did you first hear about gluten-free products?

On the internet.

Question 4:

Are you already following a complete gluten-free diet or are you just trying to avoid gluten occasionally?

I am mostly following gluten free diet.

Question 5:

Do you believe wheat products should be completely avoided and if yes, why?

Yes, absolutely. This is connected to my first answer, because wheat is completely changed and it's not healthy any more. So it should be completely avoided.

Question 6:

Do you make your own gluten-free bread?

Yes.

Question 7:

Despite the global trends, Zagreb, a capital of Croatia with a population of over one million, offers a limited number of different gluten-free products. How do you feel about that and how would you change that?

It should absolutely offer more gluten free products all around the city. I agree that the current offer is poor, and bakeries should offer gluten free products.

Interview with Ms. Nataša (34), from December 27, 2014Question 1:

If Zagreb's bakeries introduced gluten-free products, you answered you would be interested in buying them. Why?

Yes, because I would like to try something new, because so far I haven't tried it.

Question 2:

Why do you think gluten-free products are becoming more popular globally?

Because people haven't been aware until now about gluten free food and this is something new in Croatia and awareness is starting to grow.

Question 3:

Where did you first hear about gluten-free products?

I heard it from my former boss. He started to sell some kind of gluten free products in Croatia, so that was the first time I heard about it.

Question 4:

Are you already following a complete gluten-free diet or are you just trying to avoid gluten occasionally?

No.

Question 5:

Do you believe wheat products should be completely avoided and if yes, why?

I think they shouldn't be avoided because I think people should eat everything, but in small doses.

Question 6:

Do you make your own gluten-free bread?

No.

Question 7:

Despite the global trends, Zagreb, a capital of Croatia with a population of over one million, offers a limited number of different gluten-free products. How do you feel about that and how would you change that?

I think that offer in Zagreb is very bad. Offer should be increased. I would suggest import from other countries, because I think other countries have more gluten free products. I am going to bakeries and I didn't see gluten free bread. We should have gluten free products in bakeries. People just don't know about gluten free products in Croatia yet. Awareness should be increased.

Interview with Ms. Gal (25), from December 16, 2014Question 1:

If Zagreb's bakeries introduced gluten-free products, you answered you would be interested in buying them. Why?

Well, I would be interested in buying them because I actually do practice eating less white flour and sugar. I try to follow more of a healthy lifestyle. So, I would prefer gluten free, over something with gluten.

Question 2:

Why do you think gluten-free products are becoming more popular globally?

I think the whole 'healthy lifestyle' is becoming some kind of a trend. So, healthy lifestyle is becoming a trend, and part of it – since gluten looks like a small devil – is avoiding gluten.

Question 3:

Where did you first hear about gluten-free products?

I heard about it from one of my best friends when we were travelling in India. She has celiac disease, so this is how I learned about it.

Question 4:

Are you already following a complete gluten-free diet or are you just trying to avoid gluten occasionally?

I practice low carbs diet, so I basically don't eat any kind of bread. I do have sins, so sometimes I eat carbs. But, in that case, if I would have a choice, I would chose without gluten.

Question 5:

Do you believe wheat products should be completely avoided and if yes, why?

No. If you are not sick with celiac disease, you can process it. Of course, it's not the best for you. But, small peaces are good for immune system.

Question 6:

Do you make your own gluten-free bread?

No.

Question 7:

Despite the global trends, Zagreb, a capital of Croatia with a population of over one million, offers a limited number of different gluten-free products. How do you feel about that and how would you change that?

It's a pity. With this new health trend, these products would help sales. And since you don't have a lot of bakeries that have gluten free products, but you do have a lot of bakeries, the once that will have such products will attract more people. I am definitely for introduction of gluten free products in bakeries. It cannot make any harm.

Interview with Mrs. Mirjana (64) from December 16, 2014Question 1:

If Zagreb's bakeries introduced gluten-free products, you answered you would be interested in buying them. Why?

It could be very healthy to try to eat gluten free products. From what I have read from the newspapers, I think that this is healthy, but I don't have any personal experience. But I have heard that it is worth trying.

Question 2:

Why do you think gluten-free products are becoming more popular globally?

Because there is a special consciousness about the food. In last decade people have become aware of what food is doing to their health and their digestion. I feel that there is a better relationship with food lately, then what it used to be. People think now what they eat. So this might be one of the reasons.

Question 3:

Where did you first hear about gluten-free products?

In newspapers. Somewhere. Several years ago. It was in domestic newspaper, but I am sure that it was just translated from some foreign source.

Question 4:

Are you already following a complete gluten-free diet or are you just trying to avoid gluten occasionally?

Occasionally.

Question 5:

Do you believe wheat products should be completely avoided and if yes, why?

I don't think that they should be completely avoided and I think that wheat products are necessary for organism and I think that we need to have them included in our food.

Question 6:

Do you make your own gluten-free bread?

No. Never. I never make any bread myself. I am always buying my bread in bakery.

Question 7:

Despite the global trends, Zagreb, a capital of Croatia with a population of over one million, offers a limited number of different gluten-free products. How do you feel about that and how would you change that?

I think that we actually don't need to worry about that, because I see that the trend is going towards production of gluten free products. Only recently no body heard of them, and then suddenly there is a trend. As there are many private bakeries which are competing among themselves, I am quite sure that very soon we will have a very wide diapason of gluten free

products. I think this is the right way to go; I would want to see these products in Zagreb's bakeries.

Interview with Ms. Klaudija (43), from December 16, 2014

Question 1:

If Zagreb's bakeries introduced gluten-free products, you answered you would be interested in buying them. Why?

Yes, out of curiosity to try to see how my body responds to diet with and without gluten – to compare possible differences.

Question 2:

Why do you think gluten-free products are becoming more popular globally?

Because it was found that in certain doses gluten can cause digestive problems to everybody

Question 3:

Where did you first hear about gluten-free products?

From the media. I first heard about people with celiac disease who cannot tolerate this protein.

Question 4:

Are you already following a complete gluten-free diet or are you just trying to avoid gluten occasionally?

No. To the both.

Question 5:

Do you believe wheat products should be completely avoided and if yes, why?

No.

Question 6:

Do you make your own gluten-free bread?

No.

Question 7:

Despite the global trends, Zagreb, a capital of Croatia with a population of over one million, offers a limited number of different gluten-free products. How do you feel about that and how would you change that?

It's a major problem for people who have to keep strictly gluten free diet. I think Croatian Society for celiac disease should pressure mayor food producers to focus more on production of specialized gluten free food.

Interview with Mr. Ivan (42), from December 16, 2014Question 1:

If Zagreb's bakeries introduced gluten-free products, you answered you would be interested in buying them. Why?

Yes, I would buy them if price will not be very high. It will depend on the price.

Question 2:

Why do you think gluten-free products are becoming more popular globally?

Because of gluten intolerance campaign.

Question 3:

Where did you first hear about gluten-free products?

I heard about it several years ago in one commercial for some gluten free product.

Question 4:

Are you already following a complete gluten-free diet or are you just trying to avoid gluten occasionally?

I try to avoid gluten. When it's possible, I chose gluten free product in the store.

Question 5:

Do you believe wheat products should be completely avoided and if yes, why?

Some gluten product should be avoided. But if we completely remove gluten from our diet, some enzymes will disappear from our system, and that is not good.

Question 6:

Do you make your own gluten-free bread?

I try to make several gluten free products, including bread from gluten free flour.

Question 7:

Despite the global trends, Zagreb, a capital of Croatia with a population of over one million, offers a limited number of different gluten-free products. How do you feel about that and how would you change that?

People can find gluten free products in Zagreb, but not on every corner. More products should be offered to buyers which are looking for gluten free products.

Interview with Ms. Dolores (62), from December 30, 2014Question 1:

If Zagreb's bakeries introduced gluten-free products, you answered you would be interested in buying them. Why?

I would like to try something new.

Question 2:

Why do you think gluten-free products are becoming more popular globally?

People are imitating each other. And then something becomes a trend; sometimes with a good reason, and sometimes without any reason.

Question 3:

Where did you first hear about gluten-free products?

From my daughter.

Question 4:

Are you already following a complete gluten-free diet or are you just trying to avoid gluten occasionally?

No.

Question 5:

Do you believe wheat products should be completely avoided and if yes, why?

No.

Question 6:

Do you make your own gluten-free bread?

No.

Question 7:

Despite the global trends, Zagreb, a capital of Croatia with a population of over one million, offers a limited number of different gluten-free products. How do you feel about that and how would you change that?

Actually, I don't care about it.

Interview with Ms. Ana (19) from December 30, 2014Question 1:

If Zagreb's bakeries introduced gluten-free products, you answered you would be interested in buying them. Why?

I would like to avoid white bread as much as possible. If I had a chance to buy tasty bread which is made out of different and healthier flour, I would.

Question 2:

Why do you think gluten-free products are becoming more popular globally?

I think a big part of it has to do with marketing and food industry. People are always trying to find more ways how to make more money. On the other hand, I do believe that wheat is not so healthy, and that all these bakeries are just making us fat.

Question 3:

Where did you first hear about gluten-free products?

I heard about it while I was searching something online. I think it was an online woman magazine...

Question 4:

Are you already following a complete gluten-free diet or are you just trying to avoid gluten occasionally?

I am planning to start following gluten free diet, but somehow, I still haven't started. It is my plan.

Question 5:

Do you believe wheat products should be completely avoided and if yes, why?

I am not sure. I would like to try to avoid them, and then compare how I feel when I eat them, and how I feel when I don't eat them.

Question 6:

Do you make your own gluten-free bread?

I tried several times. Then I just got lazy.

Question 7:

Despite the global trends, Zagreb, a capital of Croatia with a population of over one million, offers a limited number of different gluten-free products. How do you feel about that and how would you change that?

Zagreb should definitely have a bigger offer of gluten free products. And bakeries should try to offer a line of products that contains less fat, less salt, sugar, etc. Bakeries should have gluten free products. Customers always like to have more choice