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IMPACT OF SENSORY MARKETING ON CONSUMER´S BUYING BEHAVIOUR

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ABSTRACT

Knowing consumer's behaviour, his/her preferences and reactions provides company with better chance to establish itself in trade. While doing research, it is very important to analyse and search for answers to questions why customers do the shopping, what they buy, when, where and how often they do the shopping. The decision to buy a product or service is influenced by many factors, including not only cultural, social, psychological but also personal factors. Sensory marketing itself is coming to the foreground and more and more people are realising its position. This document is dedicated to issue which is useful not only for companies but also for consumer himself. It deals with involvement of sensory and tries to clarify their importance in business communication. The aim of research document was evaluation of senses and their influence on consumer's behaviour in shopping area. The comparison of generations and their buying habits during shopping behaviour was also important. Primary data were gained through a questionnaire which was realised on sample of 312 respondents. The impact of sensory marketing was generally aimed on factors which influence consumers while doing shopping. In questionnaire, respondents were divided into three groups/generations according to their age (young, middle aged and elder). The questionnaire research confirmed that sight was the most influenced sense when doing shopping (62%). Irrational consumer's behaviour was also confirmed. There were some differences shown among generation groups. Research confirmed that the sensory perception of these generations is different. More assumptions were formulated for a deeper analysis and their relations were verified by means of statistical test (Pearson Chi-kvadrat goodness-to-fit test). On the basis of required results was confirmed that most of customers do not realise the impact of individual senses on shopping behaviour.

Keywords: sensory marketing; human senses; consumer; shopping behaviour; impact of factors

INTRODUCTION

The task of sensory marketing is to persuade consumers to give preference to buy products and services among others. In order to manage that five senses are used. This type of marketing is based on requirements of consumers. Customer's loyalty influenced by their experience has a big role **(Hultén et al., 2009)**.

Terms *taste*, *touch* and *sight* have been a part of marketing area for longer time, but term *sensory marketing* has appeared primarily after application of other senses (smell and hearing). According to this, we can define term sensory marketing as relatively young sphere of marketing, because using these tools appeared on European and international market at the turn of 20th century **(Martínez, 2007)**.

Krishna (2012) defines sensory marketing as a type of marketing whose main task is to connect senses and influence consumers' perception, judgement and behaviour **(Hultén, 2011)**.

Sensory marketing deals with creating atmosphere in stores. Its aims are five senses – visual, auditory, tactile, olfactive and gustative. Its task is to have an indirect impact on consumers' senses and arouse emotions which may influence them **(Lee and O' Mahony, 2005)**.

Visual marketing is based on visual sense. It is a special kind of marketing, because application of its particular parts is complicated. Sight belongs to the most used sense among the others **(Chingching, 2001)**.

Auditory marketing belongs to later forms of marketing. Gradually, it is becoming an integral part of our daily routine – shopping. As emerged from marketing researches, music in stores has an impact on time spent in stores and also on the amount of money spent. From the psychological point of view, the consumers are influencable by music. If customers listen to music they like while shopping, they are willing to spend more money **(McLeod, 2014)**.

Tactile marketing is based on touch, by means of which the customer familiarizes with a product and its functual characteristics. Touch is a very significant sense for shopping because there are many products where it is important to touch them. Touch itself is influenced not

only by shape and structure of package, but also by its graphical aspect **(Wright et al., 2013; Mokrý et al., 2016)**.

Olfactory marketing – a scent in stores as a marketing tool is used since time immemorial. People are able to recognize more than four thousand scents. As mentioned above, it is necessary to approach this marketing with sense and reason **(Winer, 2009)**.

Gustatory marketing – taste is considered to be one of the most oblivious senses, which human is capable to perceive. Taste is related to other senses and their combination creates final gustatory experience, e. g. taste and smell, taste and sound **(Chylinski, 2011)**.

The above mentioned five senses serve to enable people processing perceived information by means of sense organs. When hearing the term sense organs we recall five basic senses: sight, olfactory sense, gustatory sense, auditory sense and tactile sense. On one hand, it is logical that people use these senses in shopping process to gain necessary information in order to make right decision. On the other hand, naturally, the same applies to the sellers **(Lindstrom, 2006; Krishna, 2013)**.

Consumer perceives the setting of a store through all of senses. This perception can be defined as a process on the basis of which people organise, select and gain information from the surrounding **(Berčík et al., 2016)**.

Consumer's behaviour is behaviour of an individual, groups or organisations on the market of products and services where the main aim is to satisfy their needs **(Nagyová, Berčík and Horská, 2014; Kozelová et al., 2011)**. This term also includes also usage, sale and purchase of products and services **(Perner, 2016; Swait and Adamowicz, 2001)**.

Nagyová (2012) claims that decision-making of consumers on the food market is influenced by trends in food industry and also by eating habits and consumers' relations **(Plassmann et al., 2007; Strack et al., 2006)**.

Decisions made by consumers might be influenced by other factors as well, e.g. price, brand, country of origin or choice of shop **(Kapsdorferová, 2008; Soars, 2009)**. Lately, country of origin is coming to fore as one of the main factors which influences consumers when buying food. This was confirmed also in document by **Kubelaková and Šugrová (2017)**. Among factors which influence consumers belong their preferences though which they make decisions **(Guziy, Šedík and Horská, 2017)**. Preferences are different with each consumer. It was found out that there are some specific differences in consumers' behaviour on the basis of sense preferences of men and women **(Bruwer et al., 2011)**. According to researches, women are more impulsive shoppers. This fact is caused by failure of self-control which leads to rash shopping **(Baumeister, 2002)**.

Scientific hypothesis

We set assumptions on which we applied pivot tables. Subsequently, we verified assumptions through one mathematical-statistical method - Pearson Chi-kvadrat of goodness-to-fit test.

Assumption No. 1: We assume no the dependence between sex of respondent and the most used sense when shopping.

Assumption No. 2: We assume no the dependence between colour of product and sex of respondent.

Assumption No. 3: We assume no the dependence between sound factors and sex of respondent.

Assumption No. 4: We assume no the dependence between gustatory factor and sex of respondent.

Assumption No. 5: We assume no the dependence between time horizon of day when doing shopping and sex of respondent.

MATERIAL AND METHODOLOGY

For research purposes, a questionnaire research was held in physical and paper form in Slovakia. Research was innovated and it was connected to questionnaire survey **(Géci; 2017)**. In period from February to March 2017 we gained sample of 312 respondents of different age groups. The aim was to gain relevant number of answers for questionnaire research. Questions in questionnaire were divided into two parts (demographic data and general sensory marketing) and questions offering alternative answers.

According to structure of respondents, there were 51% of women and 49% men. Our aim was to gain the answers from respondents of different age groups. Most respondents marked interval from 6-18 year (38%). Second interval which represented middle generation (from 19 to 65 years), was marked by 30% of respondents. People of elder generation represented 32% of total number of respondents. The highest achieved educational interval was high school with leaving exam (35%), high school without leaving exam (23%) and primary school (19%). The aim is to make the most detailed evaluation of sensory marketing. Its explanatory power will be most significant. Based on results, we set assumptions which we subsequently confirm or dismiss by chosen statistics methods. Pivot tables will be used to verify assumptions. Assumptions will be verified by method of mathematical statictics – Pearson Chi-kvadrat of goodness-to-fit test.

We will determine the probability level – alpha ($\alpha = 0.05$), which will be compared to the significance level (*p-value*). Based on alpha (α), we can evaluate the hypothesis with the *p-value* comparison. If *p-value* is lower than alpha (α), we will refuse H_0. If *p-value* is higher than alpha (α), we will not refuse H_0.

RESULTS AND DISCUSSION

Data were gained from 312 respondents and bigger part consisted of women (51%). Each age interval reached nearly same number (%) of respondents. The highest educational status (high school with leaving examination) has 35% of respondents. The economical status *Student* was marked by most respondents (47%) and second biggest group were retired people (32%).

Monthly income of respondents ranged in large range (Figure 1). From the graph we can see that most of respondents claimed that their monthly income is from 301 € to 500 €. Another most marked group was income from 101 € to 300 € (27%). Those results were expected because questionnaire research was aimed on all three existential generations. Interesting fact is that income above 1,001 € and more is maintained by only two percents of our research. Regarding the permanent residence, 56% of respondents stated that they live in a village, whereas other 44% live in a city.

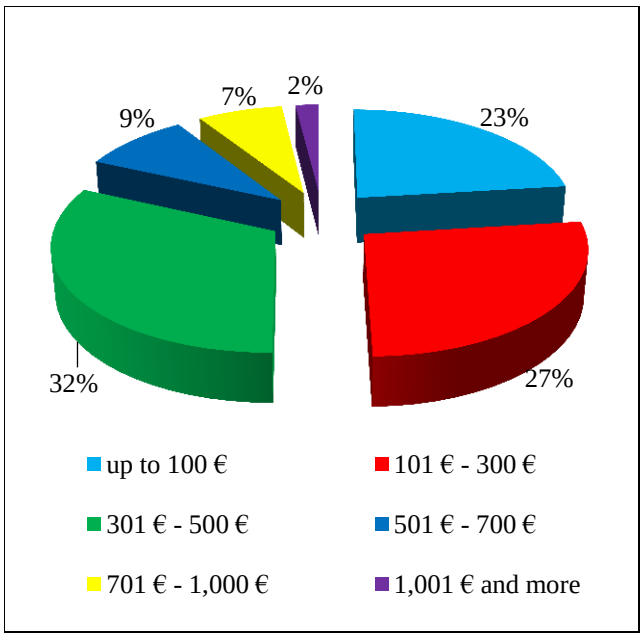

Figure 1 Monthly income of the respondent.

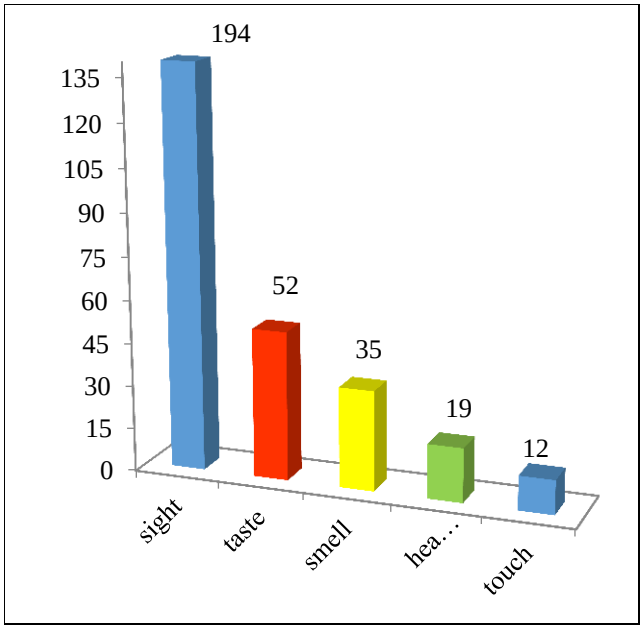

Figure 2 The most affected sense when buying food.

Another question was aimed on sense which often influences respondent the most while purchasing. Sight was on the first place (62%). Gustative sense was on the second place with 17%, then olfactory sense and on the last place hearing (Figure 2). Based on above mentioned and also on research Dílči výsledky výzkumu GA 402/02/0152 **(Koudelka, 2008)** we may claim that sight is the most significant sense among other senses which influence consumer in his shopping decision-making **(Hultén, 2012; Bloch, 2008)**.

Statistical observation on set assumption was realized on the basis of these factors – whether there is relation between sex of respondent and the most used sense when shopping.

H_0: There is no the dependence between sex of respondent and the most used sense when shopping.

H_1: There is the dependence between sex of respondent and the most used sense when shopping.

In order to verify this relation we use in pivot tables p-value of Pearson Chi-kvadrat goodness-of-fit test and significance level:

p-value = 0.4007 >α = 0.05

We accept null hypothesis and we claim that with 95% reliability there is the dependence between sex of respondent and the most used sense when shopping. Based on results of Pearson Chi-kvadrat goodness-of-fit test we consider our assumption to be correct.

Following question dealt with irrational behavior which is realized by consumer (Figure 3). We asked whether they bought some food only on the basis of senses. Most of respondents answered positively, concretely 79%.

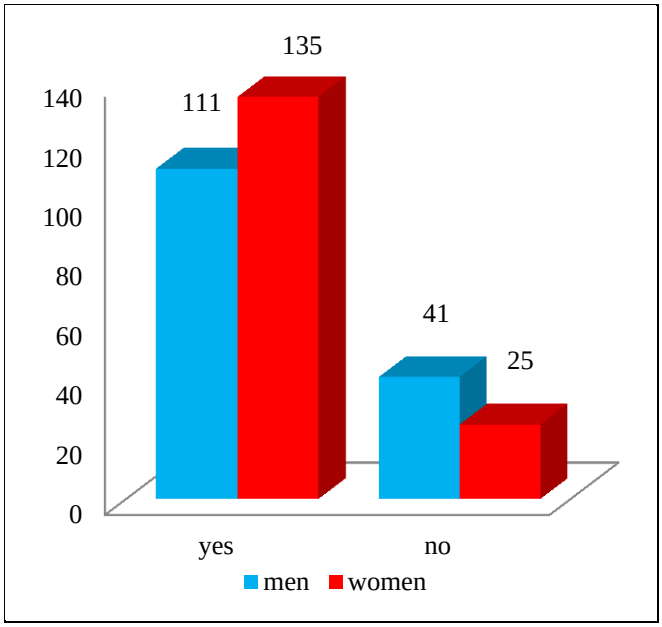

Figure 3 Comparison of women and men.

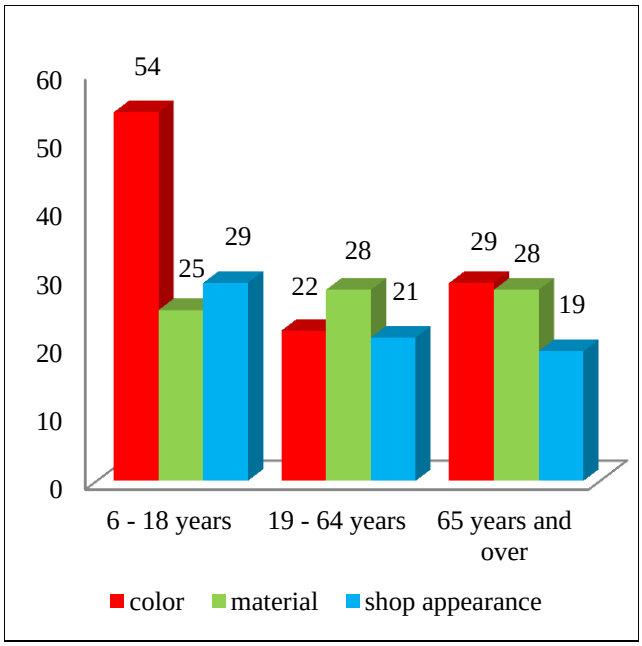

Figure 4 Comparing visual facts on generations.

Research held by **Dunning (2007)** also confirmed that most of consumers behave irrationally. Comparison among sexes showed that 84% of women and 73% of men purchased food because of sense perception.

Next we evaluated basic senses of respodent's perception. Questions referred to factors which affect purchase decision-making. We aimed on all five senses, so all of them were evaluated in questionnaire research.

On the basis of visual evaluation we can say that respondents took notice of colourfulness of particular food – their surface or packaging (34%). Similar visual character was researched in document by **Mueller and Szolnoki (2010)**. Furthermore they take notice of design of packaging. This fact was marked by 26% of asked people. On the third place was shop. It was marked by 22% of respondents. Figure 4 shows comparison of generation differences through visual factor.

All three generation groups have the same visual factor same, there is only change in multiplicity. Young generation prefer colour (50%). Secondly, they notice design of a store and its cleanliness (27%), another factor is material (23%). Regarding middle generation are visual preferences follows: on the first place is material (39%), on the second is colour (31%) and thirdly it is design (30%). Elder generation first takes notice of material (37%), then colours (38%) and finally design (25%). We can claim that existence of differences is clear, whether it is connected to particular sexes or consumers themselves. According to authors **Bruwer, Saliba and Miller (2011)** we claim that there is existence of individual differences among particular consumers and their shopping performance.

One of visual factors of this study is colour. We aimed on colour captivation in store. Most respondents marked red (39%), then yellow (20%) and green (15%). These three

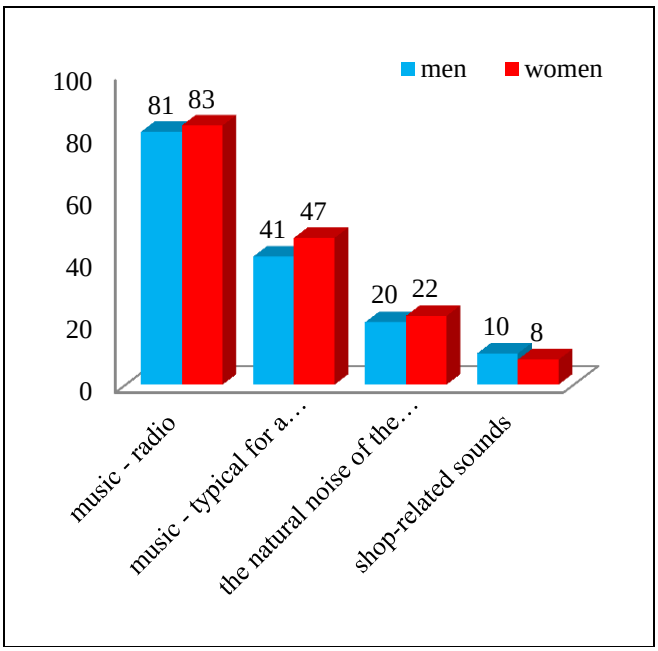

Figure 5 Comparison sound factor.

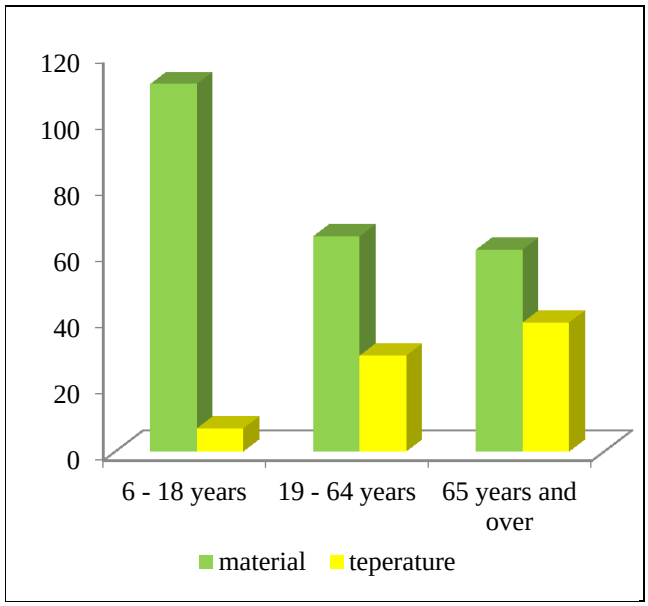

Figure 6 Comparison of tactile factors.

colours were more or less expected because red colour calls for activity and attracts attention of buyers. This colour is used to signalise sales or discounts. Yellow colour is colour of gold and it expresses energy and joy. Combination of these two colours (red and yellow) is mostly visible in chain stores. "Green" bio food is coming to fore lately. They are marked by green colour. This colour symbolises nature, environment, activity and it has calming effect **(Chu and Rahman, 2012)**. Research studies claim that consumer is probably by more than 78% capable to remember word or phrase, which is printed colourfully, because it activates the right hemisphere of brain and printed word (text) activates the left hemisphere of brain **(Aprilianty et al., 2016)**.

Statistical observation on set assumption: whether there is not relation between colour of product and sex of respondent.

H_0: There is no the dependence between colour of product and sex of respondent.

H_1: There is the dependence between colour of product and sex of respondent.

This relation we will use p-value in pivot tables from Pearson Chi-kvadrat goodness-of-fit test and significance level:

p-value = 0.7090 >α = 0.05

We accept null hypothesis and claim that with 95% reliability there is the dependence between colour of product and sex of respondent. From the results of Pearson Chi-kvadrat goodness-of-fit test we consider our assumption to be correct.

Furthermore, the research was aimed on sound factors which affect consumers while shopping. More than half of

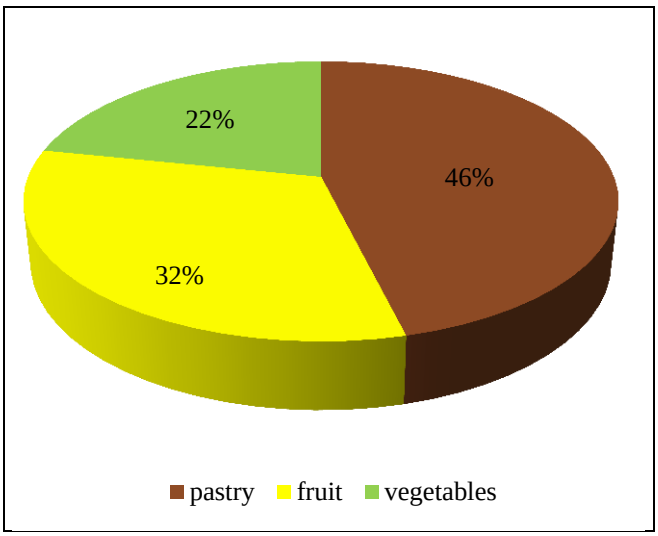

Figure 7 Sections where the smell is perceived the most.

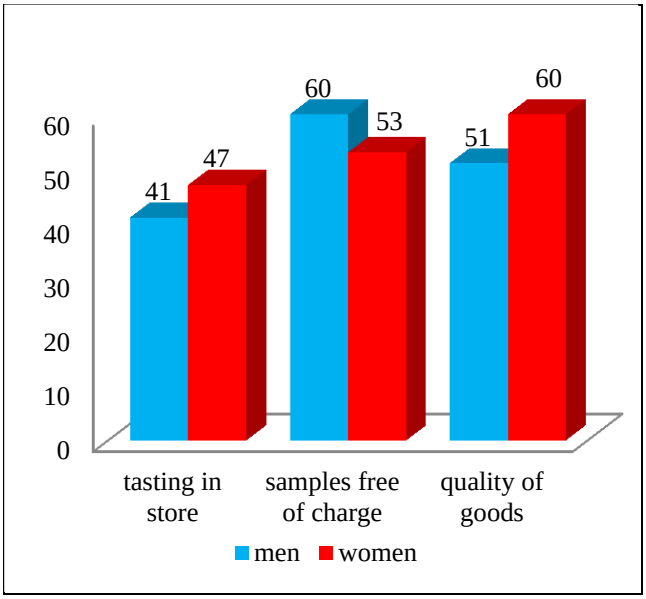

Figure 8 Comparison of taste factor.

respondents (53%) stated that they are affected by radio music while shopping. 28% of respondents stated that it is typical music for a particular shop. On the third place was natural sound of a store (13%) and on the last were shop-related sounds (6%). According to research it is clear that all three generations are affected by music broadcast by radio. In Figure 5 we can see that the same fact was confirmed in comparison of men and women.

In accordance to above mentioned factors we realised statistical observation on set assumption – whether there is connection between sound factor and sex of respondent.

H_0: There is no the dependence between sound factor and sex of respondent.

H_1: There is the dependence between sound factor and sex of respondent.

To verify this relation we will use p-value in pivot tables from Pearson Chi-kvadrat goodness-of-fit test and significance level:

p-value = 0.9086 >α = 0.05

We accept null hypothesis and claim that with 95% reliability there is the dependence between sound factor and sex of respondent. According to results of Pearson Chi-kvadrat goodness-of-fit test we consider our assumption to be correct.

Touch was another sense observed. From the research it is clear that 76% of respondents takes notice of product material via touch, i.e. packaging and surface treatment. 24% of respondents stated that they are affected by temperature in a store when choosing food. Based on generation comparison among particular groups of respondents we can claim that all generations take more notice of packaging material (Figure 6).

Due to results displayed in the graph we can say that the older the person the more attention he pays to temperature of a store. This is confirmed by fact that person becomes smarter consumer throughout his life.

The most affected olfactory factor is natural smell of store marked by 82% of respondents. Artificially created smell was marked by only 18% of respondents. We also asked in which part of store smell was the most intensive (Figure 7).

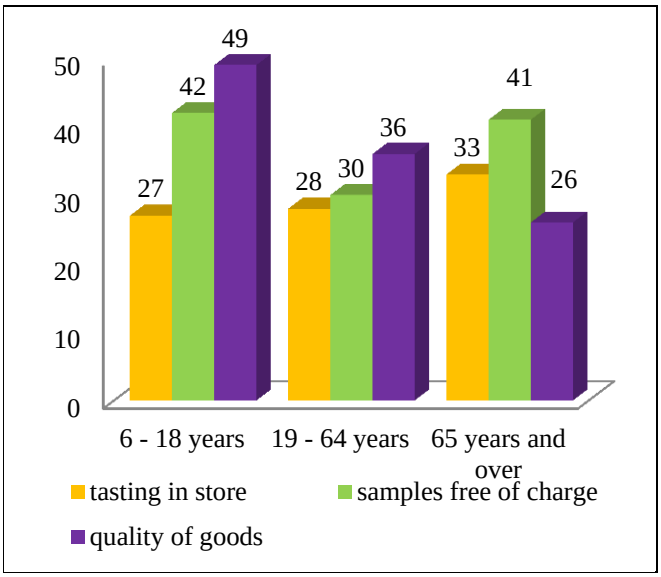

Figure 9 Comparison of taste factor.

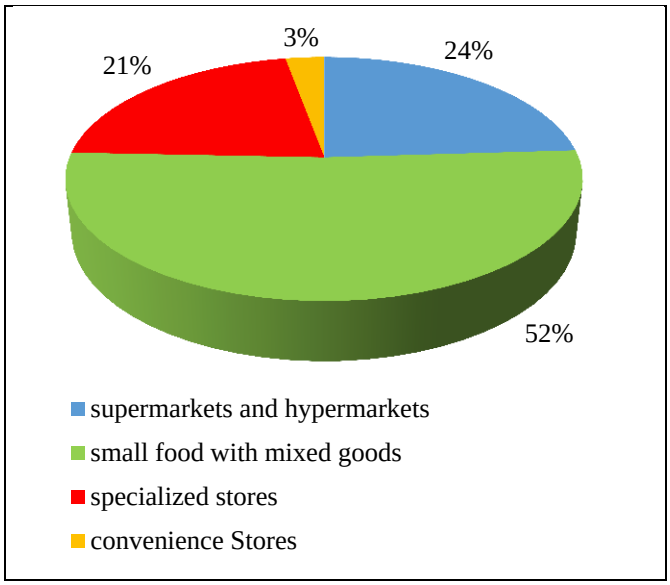

Figure 10 Shops.

From the facts mentioned above it is clear that the smell is most intense in pastry department, then in fruit and vegetables department. Olfactory factor was used in spices department, meat and dairy products department.

The last sense evaluated was gustatory sense. The most affecting factor were free samples marked by 36% of respondents, secondly the quality of product (35%) followed by degustation of food (29%). On the basis of comparison of both sexes (Figure 8) we can say that women were more affected by quality of products whereas men were by free samples.

To be more transparent, we decided to compare this question on the basis of generation differences. Figure 9 states differences of gustatory factor.

Graph shows that young and middle generations prefer quality of product, while elder generation is affected by free samples the most.

Last category of questionnaire questions concerns shopping it self. We asked how often respondents buy convenience food, e.g. bread, butter, milk, etc. More than half of respondents' (58%) answer was daily. 16% of respondents stated that they do shopping once a week and 13 % stated that they do shopping once within three or four days.

Application of statistical research assumption – whether there is relation between gustatory factor and sex of respondent.

H_0: There is no the dependence between gustatory factor and sex of respondent.

H_1: There is the dependence between gustatory factor and sex of respondent.

To verify this relation we will use p-value in pivot tables from Pearson Chi-kvadrat goodness-to-fit test and significance level:

p-value = 0.7130 >α = 0.05

We accept null hypothesis and claim that with 95% reliability there is the dependence between gustatory factor and sex of a respondent. According to results of Pearson

Chi-kvadrat goodness-to-fit test we consider our assumption to be correct.

Following question dealt with in which time horizon of day consumers do shopping. Most of them answered (63%) that they perform this activity in the morning. Secondly, it was performed in the evening (16%). These results were expected – young and middle generations mostly do shopping before work/school or after work/school.

The penultimate question was aimed on stores. According to Figure 9 it is clear that most of respondents prefer shopping in general merchandise stores (52%). Secondly, supermarkets and hypermarkets (24%), then specialised stores (21%), like butcher's, chemist's, stationery.

Convenience store was on the last place. This kind of stores is slowly disappearing because of growth of supermarkets and hypermarkets. Due to their opening hours and broad sortiment of supermarkets and hypermarkets convenience stores have no chance.

Statistical observation on set assumption – whether there is no relation between time horizon of day when doing shopping and sex of respondent.

H_0: There is no the dependence between time horizon of day when doing shopping and sex of respondent.

H_1: There is the dependence between time horizon of day when doing shopping and sex of respondent.

To verify this relation we will use p-value in pivot tables from Pearson Chi-kvadrat goodness-to-fit test and significance level:

p-value = 0.5063 >α = 0.05

We accept null hypothesis and claim that with 95% reliability there is the dependence between time horizon of day when doing shopping and sex of respondent. From the results of Pearson Chi-kvadrat goodness-to-fit test we consider our assumption to be correct.

Last question was aimed on average of money respondents spend in a week for convenience food only, e.g. bread, milk, butter, etc. (Figure 10).

According to research, 46% of respondents is willing to spend from 51 € to 101 €, next interval was up to 50 € and third was from 101 € to 150 €. Only 2% of respondents spend on convenience food from 251 € and more.

CONCLUSION

Based on research, it was confirmed that most consumers behave irrationally when doing shopping. According to submitted document it is clear that 246 respondents (79%) behaved irrationally, that means they purchased food based on perception of particular sense

Sight is the most important sense from all of senses, which influences consumer. Second sense is gustatory sense (17%), followed by olfactory sense. The least used sense is hearing.

Colour and material of surface of particular packaging of visual factors influences consumers. Colours that attract attention the most are red, yellow and green. The most affected auditory factor marked by consumers is radio music. Touch is affected the most by material of particular products. Olfactory sense is affected by natural smell. Respondents marked that the most perceived smell is smell in these departments: pastry, fruit, vegetables, spices. Gustatory senses are affected most by free samples.

Young generation has different sense perception than elder generation. Their purchasing habits are different. According to research it was confirmed that elder generation does shopping more often than young and middle generation. Elder people do shopping rather in the morning, middle generation prefer to do shopping later in the evening.

According to generation comparison of respondents we claim that they perceive their surrounding through sense differently so they also perceive impact of sensory marketing differently.

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