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THE INFLUENCE OF COMMUNICATION AND MASS-MEDIA CAMPAIGNS ON CHOOSING FOOD ITEMS

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Abstract

In recent years, healthy eating, the alarming problems of obesity and food advertising have become a topic of intense debate. These wide-ranging discussions explore how advertisements shape our perceptions of food, leading us to choose certain products. In this context, the aim of this study was to investigate whether there are significant gender differences in the influence of communication campaigns and media on food choice. Data were collected using a questionnaire (114 people) and the statistical procedures used were descriptive statistics and Pearson Chi-Square test (testing the significance of differences). Testing the significance of the differences between the values observed in the study and the expected values, according to the formulated hypotheses, revealed that these differences are not significant with regard to the respondent's gender variable, in relation to the analysed items. The results obtained are informative in terms of food purchasing behaviour of food products.

Key words*: food, healthy nutrition; consumer behaviour, socio-demographic factors.*

INTRODUCTION

The promotion of food products in the form of advertisement (publicity) is considered a commercial activity aimed at gaining the interest of the consumer. Vaughan (1980) and Jones (1998), in the advertising planning model, made a ranking of the effect in psychological terms for the interaction between psychology and advertising. This interaction is based on the three related processes: learning, emotions/feeling and doing/acting. Logical approach to thinking and high involvement in this process (Egger et al., 1997; 1999; Conner & Armitage, 2002) are important factors in the decision to choose and purchase food products.

Appropriate legislation exists to limit the way in which food products are promoted through communication and media campaigns. Advertisements are regulated by law (Caraher, 2001, 2003; Shepherd, 2009; Nestle, 2002) and due to the contradictions between the medical field and that of the food industry (producers). This conflict is supported by a number of studies. For example, Morgan (2003) produced a report concluding that the food industry needs to review its marketing practices and adapt them to concerns about healthy eating. Similar conclusions were drawn by UBS Warburg (2002). Both reports point to the potential of advertising in food choices. This aspect can lead to partnerships between the food industry and nutrition for public health. Also, numerous studies show a strong link between watching TV commercials and buying food products whose consumption leads to obesity (OMS/FAO, 2003; Taras & Gage, 1995; Lewis & Hill, 1998, Lindstrom & Seybold, 2003; Lewis & Hill, 1998; Hastings et al., 2003; Jarlbro, 2001; Robinson, 1998). There are also studies that demonstrate the positive aspect of promoting food products through advertisements (Klepp et al., 2007; Ind, 1993).

Calvert (2008) carried out a study on the implications of advertising in the choice of fast food, concluding that advertising has considerable effects on the choice of food by children and young people. In addition, there is evidence to indicate that young people influence their parents' buying patterns by requesting specific snacks or foods. Moreover, Hasting et al. (2003) argue that the effect of food promotion has been underestimated.

The aim of the study was to investigate a statistical population to find out the influence of advertising campaigns through mass media

channels, regarding the choice/purchase of food products.
As objectives to this end:
O1 Descriptive statistics regarding the organization and summary presentation of the questionnaire results
O2 Testing the significance of differences between certain types of variables, in relation to the variable gender of individuals. All variables are categorical.

MATERIALS AND METHODS

Materials

The investigation was carried out on a sample of 114 people, of which 73 were female and 41 were male, both from the urban environment (75 people) and from the rural environment (39 people). In order to identify whether the goals pursued in the study vary according to age, one of the items targeted this characteristic. The people participating in this study fall into the following categories: 20-30 years old (62 people), 31-40 years old (18 people), 41-50 (19 people), 51-60 (11 people) over 60 (4 people). Also, the educational level is an influencing factor of the objectives pursued in this study. For this item we had 4 answer options, respectively: high school level (23 people), professional level (17 people), university studies (52 people), postgraduate studies (19 people).

Study methodology

Methodology for making the questionnaire

To carry out this study, a questionnaire was designed, with 19 items.
The questionnaire was structured in 2 sections:
a. Socio-demographic data (4 items)
The personal, demographic and socio-economic attributes of the respondents were inferred based on the answers related to gender, age, level of education and domicile.
b. Perceptions of advertisements (15 items)
The questionnaire was designed in such a way as to meet the objectives pursued in the study. Most of the questions were closed, respondents could only choose from the options provided. Some of the questions were open-ended allowing the interviewees to express their opinions freely, precisely in order to gather as diverse a range of opinions as possible.

Data processing methodology

The interpretation of the questionnaire (Poșan, 2022) was achieved through the numerical (graphical) and summative presentation of the data.
Testing the significance of differences was done using the Pearson chi test.
The chi-square test (χ^2) of the association - is used for situations where the nature of the data collected for research is of the "counting" type, respectively it is characteristic of qualitative characters, being a non-parametric test.
The calculated χ^2 value was determined based on the calculation relationship:

$$\chi^2_{[GL]} = \frac{(O-A)^2}{A} \qquad (1)$$

where:
O - observed values;
A - expected values;
GL - degrees of freedom.
To achieve objective number 2, 3 hypotheses were formulated:
1. The frequency of choosing food products (A - *Always*, B - *Sometimes*, C - *Never*) is not influenced by the gender variable (female and male).
2. The way in which the choice of food products is made in relation to the influence that advertisements have: A* (*attracts my attention, but does not influence me*), B* (*makes me interested in the product*), C* (*makes me to buy that product*), D* (*I convince others to buy the product*), E* (*I don't give them importance*) is not influenced by the gender of the people (female and male).
3. The frequency of purchasing snacks in relation to viewing advertisements: A* (very often), B* (often), C* (sometimes), D* (never) is not influenced by the gender of people (female and male)

RESULTS AND DISCUSSIONS

Testing of hypothesis 1

Item tested: *Do ads help you choose the food you need?*
We were interested in checking whether the choice of food products is influenced by advertisements.
Of the 40 respondents who mentioned that they are *Always* influenced by advertisements when

purchasing food products, 24 are female and 16 are male. A large share of respondents (57.89%) stated that only *Sometimes* advertisements influence the choice of food products. From this category, 69.70% are female and 30.30% are male. There were only 8 people who stated that advertisements *Never* influence the purchase of food, respectively 3 female and 5 males.

To establish whether the observed differences are significant, the contingency table (Table 1) and the χ^2 test (Table 2) were developed.

Table 1. Correspondence table for gender characteristics and measurement scale levels

Features	Always	Sometimes	Never	Total columns
Female	24	46	3	**73**
Male	16	20	5	**41**
Total number of lines	**40**	**66**	**8**	**114**

Determination of statistical decision criteria:

• Critical level α = 0.05 (P = 95%), for significant differences

• GL = degrees of freedom = (2-1)*(3-1) = 2

• The tabular χ^2 value for these conditions is 5.99.

Since the calculated value (3.6476) of the test is lower compared to the tabular one (5.99), we accept the null hypothesis, concluding that there are no significant differences between the two genders regarding the influence of advertisements on the choice of food products (Table 2).

Table 2. Significance testing of differences

Characteristic	Observed frequency fO	Expected frequency fA	$f_O - f_A$	$(f_O - f_A)^2$	$\frac{(f_O - f_A)^2}{f_A}$
Female A*	24	25.616	-1.616	2.611456	0.101946
Female B*	46	42.2664	3.7336	13.93977	0.329807
Female C*	3	5.1232	-2.1232	4.507978	0.879915
Male A*	16	14.384	1.616	2.611456	0.181553
Male B*	20	23.7336	-3.7336	13.93977	0.587343
Male C*	5	2.8768	2.1232	4.507978	1.567011
Total number of lines	**114**	**114**			**3.6476**

Caption: A - Always, B - Sometimes, C - Never

Testing of hypothesis 2

The item tested: *How do you think you are influenced by advertisements when choosing food products?*

Most of the interviewees (40.35%) stated that advertisements attract my attention but do not influence me, of which 69.56% are female and 30.44% are male. The answer option *Make me interested in the product* was chosen by 35 of the respondents. The number of female respondents was almost double that of male respondents. Approximately equally, in terms of gender, the people who participated in the study mentioned that the ads *make me buy the product*. This category represented 8.77% of all respondents. A rather small number of interviewees (2 female and 5 male) chose as an answer that *they make me talk others into buying the product*. Some of the people interviewed (14.03% - 62.5% female and 37.5%) considered that advertisements are not important in choosing food products, choosing the answer option: *I do not consider them important* (Table 3).

Table 3. Correspondence table for the gender characteristic and item variants

Characteristics	Female	Male	Total number of columns
They draw my attention, but do not influence me	32	14	**46**
They make me interested in the product	23	12	**35**
They make me buy the product	6	4	**10**
They make me talk others into buying the product	2	5	**7**
I don't consider them important	10	6	**16**
Total number of lines	**73**	**41**	**114**

The research problem for this hypothesis consisted in testing the significance of the differences between the two genders regarding the perception of advertisements in the choice of food products.

Determination of statistical decision criteria:

• Critical level α = 0.05 (P = 95%), for significant differences

• GL = degrees of freedom = (2-1)*(5-1) = 4

• the tabular $\chi 2$ value for these conditions is 9.49

The statistical decision, in this situation, is that there are no significant differences between the two genders for the answer options A* (*attracts my attention but does not influence me*), B* (*makes me interested in the product*), C* (*makes me buy that product*), D* (*make me convince others to buy the product*), E* (*don't consider them important*) since the calculated value of the test (4.5637) is lower than the corresponding value in the distribution table $\chi 2$ (9.49) (Table 4).

Table 4. Significance testing of differences

Characteristic	Observed frequency f_O	Expected frequency f_A	$f_O - f_A$	$(f_O - f_A)^2$	$\frac{(f_O - f_A)^2}{f_A}$
Female A*	32	29.4584	2.5416	6.459731	0.219283
Female B*	23	22.414	0.586	0.343396	0.015321
Female C*	6	6.404	-0.404	0.163216	0.025487
Female D*	2	4.4828	-2.4828	6.164296	1.375099
Female E*	10	10.2464	-0.2464	0.060713	0.005925
Male A*	14	16.5416	-2.5416	6.459731	0.390514
Male B*	12	12.586	-0.586	0.343396	0.027284
Male C*	4	3.596	0.404	0.163216	0.045388
Male D*	5	2.5172	2.4828	6.164296	2.44887
Male E*	6	5.7536	0.2464	0.060713	0.010552
Total number of lines	**114**	**114**	**0**		**4.5637**

Caption: A* - They draw my attention, but do not influence me, B* - They make me interested in the product, C* - They make me buy the product, D* - They make me talk others into buying the product, E*- I don't consider them important.

Testing of hypothesis 3

The item for which the test was carried out: *How often did it happen in your case, after watching the advertisements for snacks, to buy that product*

For this item, four answer options were formulated (Table 5):

- *Very often*: 8.77% of respondents chose this answer option. Regarding the distribution between the two sexes, the proportions were approximately equal;
- *Often*: of all the interviewees who mentioned this aspect, 76.47% were females, and 23.53% were males. This category represented 14.91% of the total;
- *Sometimes*: the largest share of participants (52.63%) ticked this answer. Among those who chose that they sometimes buy snacks after watching ads, 57.57% are females and 33.33% are males;

- *Never*: approximately one fourth (59.26% of women and 40.74% of men) of the people participating in the study mentioned that they never buy snacks after watching an advertisement for this product category

Table 5. Correspondence table for gender characteristic and measurement scale levels

Characteristics	Very often	Often	Sometimes	Never	Total number of columns
Female	6	13	38	16	**73**
Male	4	4	22	11	**41**
Total number of lines	**10**	**17**	**60**	**27**	**114**

The research problem in this situation was represented by testing the significance of the differences observed between the two sexes in the purchase of snacks, after watching some advertisements for this product category (Table 6).

Determination of statistical decision criteria:
• Critical level α = 0.05 (P = 95%), for significant differences
• GL = degrees of freedom = (2-1)*(4-1) = 3
• the tabular $\chi 2$ value for these conditions is 7.81

Table 6. Significance testing of differences

Characteristic	Observed frequency fO	Expected frequency fA	$f_O - f_A$	$(f_O - f_A)^2$	$\frac{(f_O - f_A)^2}{f_A}$
Female A*	6	6.404	-0.404	0.163	0.025
Female B*	13	10.886	2.113	4.469	0.410
Female C*	38	38.424	-0.424	0.180	0.005
Female D*	16	17.290	-1.290	1.664	0.096
Male A*	4	3.596	0.404	0.163	0.045
Male B*	4	6.113	-2.113	4.465	0.730
Male C*	22	21.576	0.424	0.180	0.008
Male D*	11	9.709	1.290	1.667	0.171
Total number of lines	**114**	**114**	**0**		**1.490**

Caption: A - very often, B - often, C - sometimes, D - never

The calculated $\chi 2$ value (1.490) is lower than the tabular one (7.81), a situation in which the null hypothesis is accepted, concluding that there are no significant differences between the two sexes in terms of the persuasive power of information from advertisements in the purchase of snacks.

CONCLUSIONS

Promotion of advertisements and the impact they have on the consumer in terms of choosing and purchasing food products is an intense topic of discussion and debate.
The social environment in which food advertisements are promoted competes with the impact that advertisements have on food choice and purchase.

Testing the significance of the differences between the values observed in the study and the expected values, according to the formulated hypotheses, revealed that these differences are not significant with regard to the respondent's gender variable, in relation to the analysed items. As a result, it can be concluded that the frequency and manner of purchasing food products, respectively the purchase of snacks in relation to viewing advertisements, is not influenced by gender.
This study can be completed by testing the significance of the differences for the other demographic factors, namely residence, age, education level, monthly net income, in relation to the three items taken in this study. This represents one of the limitations of the study, because not taking into account all

demographic factors, an overall synthesis of how socio-demographic factors are or are not influenced by advertisements in the choice of food products was not achieved.

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