

Impact of TV Advertising on Children's Food Choices

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Abstract

This research emphasizes on the impact of TV advertising on children's food choices. For this reason, a questionnaire was prepared and focused on Food Advertisement, TV Advertisement, School Advertisement, Musical Advertisement, Children's Consumption Attitudes and analysis children's opinions who are aging from 8 to 11 years old from primary school. In a college in Avcilar—Istanbul was chosen for the survey area. This study is proposed to discover the effect of TV food advertising on children as a target group. This survey will make use of statistical techniques Hypothesis was conveyed to show the significance ANOVA and factor analysis used. Also, SPSS statistical tool used for analyzing hypothesis.

Results show that all of the four factors, food advertisement, TV advertisement, musical advertisement and musical advertisement affects the children's food consumption behavior, the results emphasis on the reality of this hypothesis and its true, and importance of it and also show that in this research obtained the result which wanted. However, regression equation can be used to estimate. In this case, according to regression analysis, TV Advertisement and Musical Advertising can be used to estimate children's food consumption behavior scores.

Keywords: food advertisement, TV advertisement, school advertisement, musical advertisement, children's consumption attitudes, consumer purchasing, advertising industry, food industry

1. Introduction

In this review, some research areas were acknowledged. Including: examines of the constancy and substance of TV marketing to kids; buying needs causing from TV food advertising; consumer purchasing, decision factors and children's consumption Attitudes. These will be considered in this essay.

It is involved with stimuli striking on people who then make selections. Lastly, the standard assumes that marketing is a representative of "out there" shaping the youth by encouragement. A different approach of theorizing would honor marketing as a social source beside other bases of evidence that the kid uses when making a food selection. The point where the child is informed with promotion would assume the understanding and consumption of marketing.

By all means, having a good and healthy generation of children is so important, therefore governments try to train parents to consider for their children eating. The education system of each country should try to informed parents and teachers with healthy eating materials and guide them how to control their children using healthy food. Based on it studying about eating program and what affected on it started in new decades.

Hameed (2014) investigated the impact of television advertisements on children buying behavior. Hameed visited different schools in Punjab, Pakistan and checked the response of children. A 5 point Likert scale questionnaire was designed. Different cities of Punjab were selected on the random sampling basis. A total 250 questionnaires were circulated, and the response rate was 100 %. The respondent agreed with the statement that there is the impact of TV advertisement on children buying behavior. The other tests like ANOVA and t-test also describe that there is the impact of TV advertisement on children buying behavior. (1). Halford and the others (2007), in their paper, investigated the effect of television advertisements on children 'seating behavior and heal this of critical interest. In the Elementary study, the examined lean, overweight and obese children's ability to recognize eight food and eight non-food related advertising.in a total 0f 42 school children aged 9-11 years analysis tree groups were created: lean, overweight and obese, based on body mass index. They found that the obese children did recognize significantly more of the food commercials (2). Aktaş (2006) in his paper discussed the role of television food advertising on children's food consumption. He believes that cancers and diabetes

have directly relation with children's eating habits. He focuses on children's behavior while watching TV advertising and analysis their requested food. The result shows that. Television advertisements directly effect on children's eating (3).

Folta et al. (2006) describe Persuasive techniques used in an advertising food and beverages to children's .she analysis 31 hours of school-age children's television program during one week in the Boston area.by analyzing 183 ads, 121 of them were for food and the findings revealed that children who spend more time with media, especially TV are more likely to be overweight (4). The eating habits of children were affected strongly by food advertising (5-7). Overweight of children has increased, especially in developed countries during recent years. For instance, in Australia over one in five children are fat and overweight (8). Unfortunately, fat children will be fatter when they are getting older too (9). Food producers are investigating on TV advertising to promote their products of brands to youth and teenagers. Ten billion dollar approximately were spent by US food companies on TV advertising to children (10). Online media play an increasingly substantial role in the youth life. The National survey in 2005 states that 86% of children and adolescents (8 to 18 years old) possess personal computer and mobile; while in 1999, only 73% children with the same age had the personal computer. Additionally, during this 5 years (1999 to 2004) the time spent on PC activities increased from twenty-seven minutes to 62 minutes daily (11). Advertisers have been targeted children advertiser by new online commercial technique. Approximately entire marketing companies having their own web page as "branded environments" that offering vibrant, amusing, and collaborative areas for children (12).

In Australia, More than one- a third of commercials during cartoons and more than half of commercial in other time and program encourage energy-dense nutrient-poor foods (13). Australian Guide to Healthy Eating is characterizing the highly promoted foods like chocolates, fast foods, and sweeties as a not essential food and asked to be used cautiously. They admitted that mentioned foods are poor nutrient food and would cause fatness if used too much. This high levels of unhealthy foods advertising pass a message over children that these foods are standardizing and desirable, hence accordingly contribute to an environment causing obesity (14). Food companies spend the huge amount of money on food products advertising exposed to children. Furthermore, the vast amount of TV ads investment comprises by food companies. In the US, almost ten billion dollars annually spent on commercials which exposed to children. Other media such as animation movie, internet, and children's magazine and so on were used for sponsoring beverage and food businesses and all this commercial were exposed to children. Promoters assume that children are the profitable business so they start to target them. During 2002, American kids, 4-12 years old, consume almost thirty billion dollars of their money on the junk/fast food, also six hundred billion dollars of family expenses were devoted t fast/junk food purchases (10).

It was supposed that skills in learning would give children reasoning defense against the plausible impact of marketing, however, it was revealed that children until 11 years old did not impulsively raise these cognitive defenses except obviously reminded to do so (15). The impression that youth are highly vulnerable to be affected by marketing than older one has been challenged by the latest research outcomes that children aged between seven to sixteen years old were more influenced by food commercial than younger one aged between two to six years old (16). Livingstone & Helpser (2006) stated that there are two possible processing route which children and youth would take in a different way, elder one have higher probability to be influenced by the massage of a product in the central processing path, whereas youth seem to be persuaded by the visuals, sounds, visuals cartoon characters, and so on in the peripheral processing path of the brain. (16).

Every morning, when people open their eyes, they face different formats of advertising that have an impact on people's life directly or indirectly. However, today producers are trying to force everyone to purchase their products. To do so, they are convincing people that this product is needed or has high quality, so they will ask consumer that please do not suspend and come to try our products. If the enormous universally force of advertising were considered, one fact that never should be forgotten would be food, which is the first and the most important item in human's life. This is so broad activity and by addicting people to their products, many producers attempt to sell their outputs. In this widespread market, identifying the merchandise that is so profitable is difficult especially for children.

Here are the main research questions

Investigating the effect of duration of watching TV on children requested advertised food.

How did food habits, trends, and traditions originate?

What kind of food styles do children demand with the influence of TV advertising?

What kind of product catches the children's eye?

In this study firstly problems were identified and some of the main problems were highlighted. The impact of television advertising on children's requested food and Children's Consumption Attitudes and analysis the Advertising Industry. Based on the new generation, eating regime is important to have healthy people in the future. Therefore, in problem selection, these items were considered.

In the next step, related researchers were gathered and studied. This topic is one of the main topics which followed by parents, governments, and industries. What should be notified is that reaching to topic needs to be families with the base parameters like food, advertising, and food advertising too, so in this dissertation tried to start from the basic definitions and go forward step by step.

Studying about children, food, and advertising is a completely broad title so it should be clarified and focused on special groups of them. Therefore the children of special age range should be selected. Children by the age of 8-11 are the first group that leaves home and enter to the society themselves and contacts with their environment and a huge group of children in the same age. They can affect each other so this thesis was focused on them. For reaching clear results and get true answers, some questions related to problems were defined. Because of the age of thesis studying age answers tried to be simplified and the broad range of their favorites tried to consider in answers.

Based on selected concepts a questionnaire was prepared to offer children in school, but to complete the questionnaires in the schools, government obligation was necessary and schools managers should accept to cooperate. The permit from Istanbul Ministry of National Education was received but in the next step school managers should be satisfied, therefore related meetings were arranged but only one of colleges cooperates friendly.

Questionnaires were structurally developed to collect data. A questionnaire is a reliable data collection mechanism when researchers know the exact intent of the survey and method used to determine the concerned variables. It is a competent technique of accumulating the huge amount of relatively accurate data about numerous variables.

This research is designed to explore the children opinions who are aged from 8 to 11 years old. This study is proposed to discover the effect of TV food advertising on children as a target group. Some points were studied and analyzed based questionnaire. A questionnaire was developed in order to examine hypothesis.

- Food advertisements have a positive relationship with Children's Food Consumption Behavior.
- TV advertisement has a positive relationship with Children's Food Consumption Behavior.
- School advertisements have a positive relationship with Children's Food Consumption Behavior.
- Musical advertisements have a positive relationship with Children's Food Consumption Behavior.

2. Method

For effective sampling method to be very efficient and result oriented, 120 Questionnaires will be distributed in DOĞA collage (Location) in Istanbul, Turkey. 105 Of them were answered by children The Districts (Location) AVCILAR. The choice of the DOĞA collage chosen from the highest population to the least populated area to give a true research outcome (TUIK, 2013).

This research is designed to explore the children's opinion that are aging from 8 to 11 years old. This study is proposed to discover the effect of TV food advertising on children as a target group.

In this study, the preset was performed on a sample of 105 children, with two different language format, English, and Turkish. Authorization from İstanbul—Avcılar İlçe Milli Eğitim Müdürlüğü (Istanbul-Avcılar Directorate of National Education) were acquired.

DOĞA collage was chosen for doing the survey and fallow the research interest DOĞA collage was chosen due to the close distance to İstanbul—Avcılar İlçe Milli Eğitim Müdürlüğü (Istanbul-Avcılar Directorate Of National Education), both genders were available in this college and both genders (Female and male) could answer to the survey.

In total 120 participants were sampled, 105 questionnaires were answered by children.

This survey will make use of statistical techniques Hypothesis were conveyed to show the significance and T-test statistic to test the level of significance in children's food choices. Also, SPSS statistical tool used for analyzing hypothesis.

The statistical population of the research includes all children at the age between 8-and 11 in Doga College in Avcılar. This research has been done for the children in different cities of Pakistan in January 2014. It is repeated

one more time for the children who are students of primary schools at DOGA collage AVCILAR district of Istanbul, Turkey. The primary school has been chosen by randomly. However, permission from the highest representative of Ministry of Education at Istanbul to have questionnaire among the primary school students was gotten.

Table 1. Age, gender and *TV Viewing Hour* frequency

	frequency	%
<i>Age</i>		
Age 8	25	23.81%
Age 9	33	31.43%
Age 10	31	29.52%
Age 11	16	15.24%
Total	105	100%
<i>Gender</i>		
Female	59	56.19%
Male	46	43.81%
Total	105	100%

The table 1 shows that out of the total 105 respondents 25 respondents are 8 years old which represents the highest 23.81%, respondents. The other 33 respondents are 9 years old, which from the survey conducted shows that 31.43% of children in this age. The 31 respondents (29.52%) are 10 years old. The remaining 16 respondents are 11 years old represents 15.24% respondents.

59 person of these children are female (56.19%) and remain of participants 46, are male (43.81%).

3. Results and Discussion

In the present research library and field methods were used to collect date Library resources were used as the base to write the theoretical framework of research and field method was used to collect information from the population by questionnaire. Therefore data collection tool of the research is the questionnaire. The questionnaire which determined effective factors on children food consumption behavior.

In the present research to investigate the reliability of questionnaire questions, Cronbach's alpha ret (α) was used, for its calculation used. Cronbach's alpha method which is used for evaluation of the extent of internal coordination of an index items, mainly is used for questionnaires and their answers are multi-choice) Cronbach's alpha coefficient fluctuates between 0 and 1, and being closer to 1 shows more compatibility of the items of one scale As a general rule the quorum, or required alpha value for one scale is assumed 70% and when the value of alpha coefficient is equal to or bigger than 70%, then the measurement tool is highly reliable and in this case it's easier to trust the results. At first in a general manner and then separately for each one of factors, Cronbach's alpha calculation has been done, it should be seen all obtained values of Cronbach's alpha are higher than 70%, therefore the questionnaire of the present research. Cronbach's alpha of questionnaire in a general form is 0,958.

Table 2. SPSS data

Factors	# of item	Cronbach's alpha	KMO	Bartlett's Chi-Square	Eigenvalue	% of Variance
Food Advertisement	5	0.908	0.773	410.427*	3.703	74.065
TV Advertisement	5	0.861	0.742	273.149*	3.213	64.270
School Advertisement	5	0.883	0.824	312.088*	3.461	69.219
Musical Advertisement	4	0.775	0.665	191.555**	2.563	64.064
Children's Food Consumption Behavior	4	0.818	0.713	216.130**	2.682	67.047

Note. *Significant in 95% level ($p < 0.05$, $df=10$). **Significant in 95% level ($p < 0.05$, $df=6$).

Cronbach's alpha test (α) was used for evaluation of the extent of internal coordination of an index item, mainly is used for questionnaires which their items or questions are designed in the form of Likert range (also interval or relative), and their answers are multi-choice.

Calculated Cronbach's alpha coefficient for Food Advertisement, TV Advertisement, School Advertisement,

Musical Advertisement and Children's Food Consumption Behavior are 0.908, 0.861, 0.883, 0.775 and 0.818 respectively.

In this survey to understand this data is suitable for factor analysis, principal component analysis has been conducted. According to the KMO sample adequacy statistics for Food Advertisement, TV Advertisement, School Advertisement, Musical Advertisement and Children's Food Consumption Behavior are 0.773, 0.742, 0.824, 0.665 and 0.713 respectively

Besides, Bartlett's sphericity was studied and its related amounts for each factor, Food Advertisement, TV Advertisement, School Advertisement, Musical Advertisement and Children's Food Consumption Behavior are 410.427, 273.149, 312.088, 191.555 and 216.130 respectively. Due to the $P < 0,05$, H_0 Hypothesis was rejected. It means that correlation between variables is accepted.

According to the Table 2, five variables of Food advertisement constitute a single factor. This factor explains the 74.065% of the variance. Thus, one score can be used instead of 5 variables. The mean of five variables has been calculated. Meantime, five variables of TV advertisement constitute a single factor. This factor explains the 64.270% of the variance. Thus, one score can be used instead of 5 variables too. Based on School advertisement, the variance was calculated 69.219% that it was changed to single dimension too. Besides, in Musical advertisement and Children's Food Consumption Behavior, one of the items was deleted to increase the Cronbach alphas values and continue based on new questions. Because of that revision, according to the factor analyzing, five variables constitute a single factor, calculated KMO values (0.775 for Musical advertisement and 0.818 for Children's Food Consumption Behavior) were $> 0,60$ so they were accepted by factor analyzing These factors explain the 64.064% and 67.047% of variances respectively.

As the questionnaires have a lot of answers such as categories, checklists, ranking, and likert scale answers, we have to use Anova (Analysis of Variance) for the hypothesis testing. Analysis of Variance Test (ANOVA) a statistical tool that is used is to test and find differences in means in groups or in variables. The null hypothesis which does not have differences between means will be rejected and the other hypothesis that the means are different from each other will be accepted by stat soft.

Before proceeding to the analysis of the Anova whether to use it or to use the Welch test which is stronger than the Anova, we first assume the homogeneity of variance. This test whether or not the variance is the same for each of the groups we are looking at. Assuming the test of homogeneity of variance, we check the Sig level. If the Sig level is greater than the alpha value 0.05, we have not violated the assumption of homogeneity of variance. We can conclude that we have not violated the assumption of homogeneity of variance test. If the assumption of homogeneity of variance is violated, that is to say, the Sig is less than 0.05 we have to look at table 3 called the robust test of equality of means. If the result of the homogeneity of variance test was obtainable we then look at the Anova table else if it is not obtainable we then look at the robust test of equality of means table. Proceeding forward with each hypostudy to determine where the difference lies between the groups post hoc test will be used. Scheffe test and Tamhane will be used. Scheffe will be used if equal means are assumed while Tamhane will be used if equal means are not assumed.

Table 3. Independent samples test, consumption behavior

	<i>Levene Statistic</i>	<i>Sig.</i>	<i>df</i>	<i>t-test</i>	<i>Mean Difference</i>	<i>Sig. (2-tailed)</i>
Gender	0.451	0.503	103	-0.063	-0.013	0.95

Based on the independent sample of T-test, food consumption habit of gender groups are similar to each other ($p > 0.05$) it shows that there is not found catastrophic different consumption behavior between females and males.

Due to checking that is there any relation between hypostudy factors (Food Advertising, TV advertising, School Advertising, Musical Advertising) with consumer behavior, Correlation analysis were done. The results of Correlation analyses results are offered in below-mentioned table 4.

Table 4. Correlations: consumption behavior

	<i>food advertising</i>	<i>tv advertising</i>	<i>school advertising</i>	<i>musical advertising</i>
Pearson Correlation	0.699	0.842	0.694	0.684
Sig. (2-tailed)	0.000*	0.000*	0.000*	0.000*

*. Correlation is significant at the 0.01 level (2-tailed).

Regarding to the Correlation is significant values which are less than 0.01 ($p < 0.01$), confidence interval values are 99%. It can be approved that the relation between factors (Food Advertising, TV advertising, School Advertising, Musical Advertising) with Consumption behavior is logical, therefore, in this situation null hypothesis of H1, H2, H3 and H4 are rejected and their relation is approved. The maximum correlation (0.842) belongs to the TV advertising.

After this step tried to find that which dimension is so effective, therefore, regression analysis was applied. To find the relation between food consumption with other four independent variables (Food Advertising, TV advertising, School Advertising, Musical Advertising) stepwise method were utilized and linear regression analyses were studied. Related results are offered in below.

Table 5. ANOVA

<i>R</i>	<i>R Square</i>	<i>df</i>	<i>F</i>	<i>Sig.</i>
0.857	0.734	2	140.7	0.000

Regarding the stepwise method analyzing, Food advertising and School advertising variables are removed from the presented model, therefore, TV advertising and Musical advertising parameters remain in the study. 0,857 the linear coefficient of the model were calculated ($R \text{ Square} = 73,4\%$, $p < 0,01$). Model %99 is logical in confidence interval. Coefficient values of models are offered in table 6.

Table 6. Coefficients

	<i>Unstandardized Coefficients</i>	<i>t</i>	<i>Sig.</i>	<i>Collinearity Statistics</i>
(Constant)	0.000	0.000	1.000	
TV advertising	0.698	10.108	0.000	1.828
Musical advertising	0.214	3.106	0.002	1.828

Function of Consumption behavior (CB) to the TV advertising (TV) and Musical Advertising (MA) after multi-regression can be presented as

$$CB = 0.000 + 0.698.TV + 0.214.MA$$

4. Conclusion

All of the four factors (Food Advertising, TV advertising, School Advertising, Musical Advertising) effects the children's food consumption behavior, however, regression equation can be used to estimate. In this case, according to regression analysis, TV Advertisement and Musical Advertising can be used to estimate children's food consumption behavior scores. According to this study TV Advertisement and Musical Advertising have the most effect on Consumption behavior.

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