

*Full Length Research Paper*

# Correlations between children's television advertising exposure and their food preference

Mohammad Reza Nazari<sup>1,2</sup>, Md Salleh Bin Hj Hassan<sup>1,3</sup>, Saadat Parhizkar<sup>4</sup> and  
Musa Bin Abu Hassan<sup>1</sup>

<sup>1</sup>Department of Communication, Faculty of Modern Languages and Communication, University Putra Malaysia, 43400, Selangor, Malaysia.

<sup>2</sup>Islamic Republic of Iran Broadcasting (IRIB) East Asia Regional Centre, Kuala Lumpur, Malaysia.

<sup>3</sup>Institute of Social Sciences Studies, Universiti Putra Malaysia, 43400, Selangor, Malaysia

<sup>4</sup>Public health department, Faculty of health Sciences, Yasouj University of Medical Sciences (YUMS), Iran.

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**Exposure to television (TV) programs can influence children not only cognitively but also behaviourally. Most researches have focused on the extent to which children are persuaded by advertisements. Studies on the impact of advertisement on children's behaviour indicate that TV plays an important role in the selection of the advertised products by children. Furthermore, TV advertisement can create misperceptions among children about the nutritional values of foods and how to maintain good health. A survey on 450 student aged 7 to 12 years old was carried out to determine how the TV commercials could affect children's choice of food in Fars province of Iran. Finding showed more than 80% of advertisements had been related to food products. The most frequent advertised food products consisted of fat and salty snacks and different types of beverages and juices. Furthermore, a negative and high correlation was found to exist between mothers' educational level and students influence by TV advertising for brand preference and choices, food purchases and intake. Current study suggested some modifications to the legislation on TV advertisements and recommended broadcasting of healthy nutritional messages.**

**Key words:** Advertisement, children, food choice, television (TV).

## INTRODUCTION

According to Zywicki et al. (2004), nowadays children are spending more time watching TV and consequently they are viewing more commercials. As several researchers argue (Hesketh et al., 2006; Salmone et al., 2006; Groat, 2009), in the United States more time is spent on watching TV by children than on doing any other daily activity, except sleeping, and in a same line, an adolescent spends more time watching TV each year than going to school (Clancy et al., 2002; Heller et al., 2011). Although there is not a general consensus on the

impact of commercials on children and adolescents, a great number of professionals believe that TV has the ability to affect children from cognitive and behavioural aspects. Research on cognitive impacts has generally focused on the child's ability to identify between commercials and TV programs and to perceive that commercials are means implemented for selling the products (Clancy et al., 2002). As Story and French (2004) maintain, many young children, particularly under the age of six, have problems with this distinction; it is not until around the age of 12 that most children are able to understand the objectives of the advertisements. Children are targeted harshly by food marketers and advertisers, and confronted with an increasing number of commercials during television (TV) programmes, which aims at influencing their brand preference and choices, food purchases and intake (Galcheval et al., 2008).

\*Corresponding author. E-mail: [nazari860@yahoo.com](mailto:nazari860@yahoo.com). Tel: +60136407564.

As some researchers (Marshall et al., 2007; Galcheval et al., 2008) assert, a large body of research indicates that watching TV and being exposed to food advertisements is among the various environmental, social and personal factors which may lead to the development of poor eating habits and obesity in children.

As Powell et al. (2007) argue, evidence-based research reveals that watching food advertisements on TV greatly influence the children's behavioural practices, such as unhealthy dietary habits, purchase requests for high-calorie low-nutrient products and obesity. Studies have indicated that the highly advertised products are soft drinks, fast foods, sweets and other high calories foods of poor nutritional value (Harrison et al., 2005). Since children are very much interested in the food messages presented in the TV commercials, misperceptions about the healthiness of the advertised foods may develop, their increased consumption may follow and the eating of fruit and vegetable may decrease consequently (Feldman et al., 2007; Galcheval et al., 2008).

A study carried out in the Iranian context revealed that 10% of the Iranian TV commercials in the year 1996 were not working and more than half of these advertisements were displayed before the children's program. 53% of the advertisements were related to the junkets and the majority of them were not nutritive (Kelishadi et al., 2004). In 1996, 308 advertisements displayed in five Iranian TV channels during one day were examined and it was found that the great portions of these advertisements were devoted to food products (25.3%) targeting children (Cairns et al., 2009). Another study reported that 42% of all examined advertisements of Iranian TV were about junkets with the highest frequency (38 times). Among them, 47% were about puffs and 32% were about ice creams and chocolates (Kaviani and Fattahi, 2004).

As Story and French (2004) assert, there is an extensive body of research to show that food marketing influences children's food preferences, short- and long-term dietary consumption, as well as purchase requests. It is argued that younger children are more influenced by the advertisers' messages than older children, since they do not perceive the persuasive nature of the advertisements; however, there is a little direct evidence to support this claim (Chernin, 2008; Story and French, 2004). Considering the paucity of studies in this area, the main objective of the current study is to investigate the exposure of the children to TV food advertisements and its impact on their food choices, food preferences, and food intake or purchase requests in Shiraz, Iran.

## MATERIALS AND METHODS

A cross-sectional study design with multistage stratified random cluster sampling technique was carried out in Shiraz, in the South-west of Iran. The sampling frame was Shiraz Training and Educational region which is divided by four sections. From each section, one primary school was chosen randomly and 125 students were selected from each school in different levels using

random sampling. The sample units were all students between 7-12 years in the four selected schools. The study was carried out using a survey questionnaire comprising three parts; the first part was related to the demographic information of respondents, the second part with 15 questions was about the exposure to media especially TV and its advertisements, food choices, food preferences, and food intake or purchase requests and the third part included 8 questions related to the parents' attitude and practice regarding children food choice and purchase. In order to identify the marketing strategies used for the stimulation of food purchases, we asked some questions: duration of the TV viewing; the type of the advertised product (non-food, healthy or unhealthy food/beverage); frequency of advertised products; attraction of food advertisements for children based on children and their parents' point of view, etc. Data were analyzed using Statistical Package of Social Sciences (SPSS) version 17.

## RESULTS

Of the 500 school children aged 7 to 12 years old enrolled in the survey from four selected schools, 450 students participated in survey, giving a response rate of 90%. Results revealed that the majority of respondents (51.56%) were female. The overall mean age was  $9.5 \pm 2.06$  years old. Table 1 illustrated some of the characteristics of the respondents.

Majority of the mothers of the students were employed (52.66%) and 40.22% of them had finished the high school followed by a degree (32.22%), and post graduation (13.55%). The finding indicated that 79.1% of the students watched TV for three to four hours a day, while only 4% of the students were exposed to TV less than one hour in a day (Table 2).

Majority of the students (85.7%) believed that TV advertisements were attractive and encouraging them to purchase products. More than two third of the subjects (76%) had watched 3 to 5 segments of TV advertisements during the day before the survey. Most of them (81.7%) revealed that these advertisements were related to food products. In addition, majority of the students were eating snack while watching TV. The most frequent advertised food products consisted of candy/chocolate (28.5%), followed by beverages and juices (19.1%), sweet snacks (18.3%) and Fat/Salty snacks (16.8%). While only 8.6% of the advertised food belonged to healthy foods (milk products). Majority of the subjects (76.3%) and their parents (91%) believed that TV commercials had strong effect on the students' food choice. Parents also argued that children were targeted harshly by food marketers and advertisers and exposed to an increasing number of advertisements during TV programmes, which aimed at influencing their brand preference and choices, food purchases and intake.

A negative and high correlation was found between the students' mothers' level of education and the students being influenced by TV advertising for brand preference and choices, food purchases and intake ( $r = -0.788$ ,  $p < 0.001$ ). A positive and negligible correlation was observed between the mothers' occupation and the

**Table 1.** Characteristics of respondents (n = 450).

Characteristics	Frequency	percent
Sex		
Male	218	48.44
Female	232	51.56
Age		
7-7.99	82	18.22
8-8.99	94	20.88
9-9.99	91	20.22
10-10.99	97	21.55
11-11.99	86	19.11
Mothers' Occupation		
Employee	237	52.66
Housewife	213	47.34
Mothers' education Level		
Primary	27	6
Secondary	36	8
High School	181	40.22
Degree	145	32.22
Post graduation	61	13.55

**Table 2.** Students' time spent on watching TV/day.

Time (Hour)	No	%
<1	18	4
1-2	59	13.11
3-4	356	79.1
>5	17	3.78

students being influenced by TV advertising ( $r = 0.243$ ,  $p < 0.005$ ). No correlations were found between the students' sex and affection by TV advertisements.

## DISCUSSION

Current study showed that majority of respondents was heavy viewers of TV. These results were supported by several researchers who showed that students spent more than three hours for watching TV (Rasinski, 1993; Fiates et al., 2008; Lowry, 2008; Ward, 2009). According to Galcheval et al. (2008), a great number of studies indicate that watching TV and being exposed to food advertisement is among one of the various environmental, social and personal factors that impact the development of poor eating habits and overweight in children. Particularly, they target children's preferences for specific products over others and/or by the requests made for products in response to advertisement. Research on the behavioural impacts of advertisement showed that TV has an important influence on the types

of products children request and that increased TV watching leads to increased request for advertised products (Angela et al., 1993). Furthermore, as Bredbenner and Darlene (2000) maintain, TV advertisement creates misconceptions among children about the nutritional values of foods and how to maintain good health.

The finding also indicated that most of the students and their parents believed that TV commercials had strong effect on the students' food choice and also TV advertisements were attractive and encouraging them to purchase products. This result was in agreement with the finding of Kotwal et al. (2008). As Story (2004) maintains, the food and beverage industry has identified children and adolescents as the main market force recently. Consequently, children and adolescents are targeted by food advertisers, and are exposed to an increasing and unprecedented amount of advertising, marketing, and commercialism through various channels. The main objective of food advertising and marketing aimed at children is to affect the youth's brand awareness, brand preference, brand loyalty, and food purchases. Various

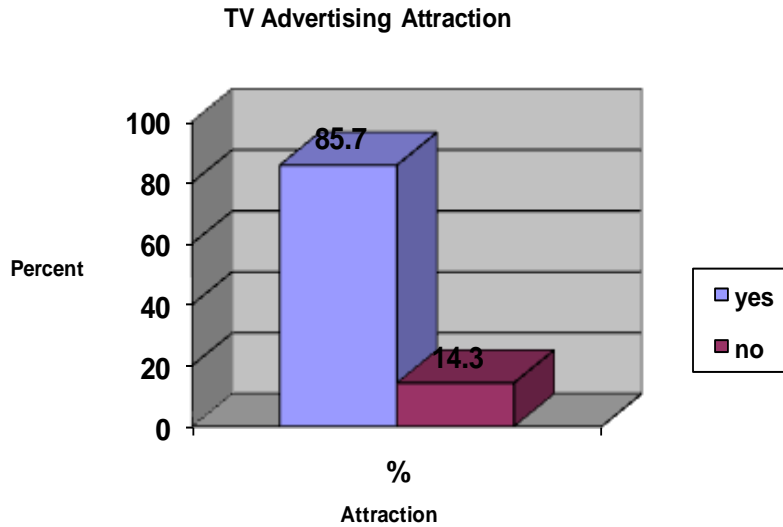


Figure 1. TV Advertisement based on students' point of view.

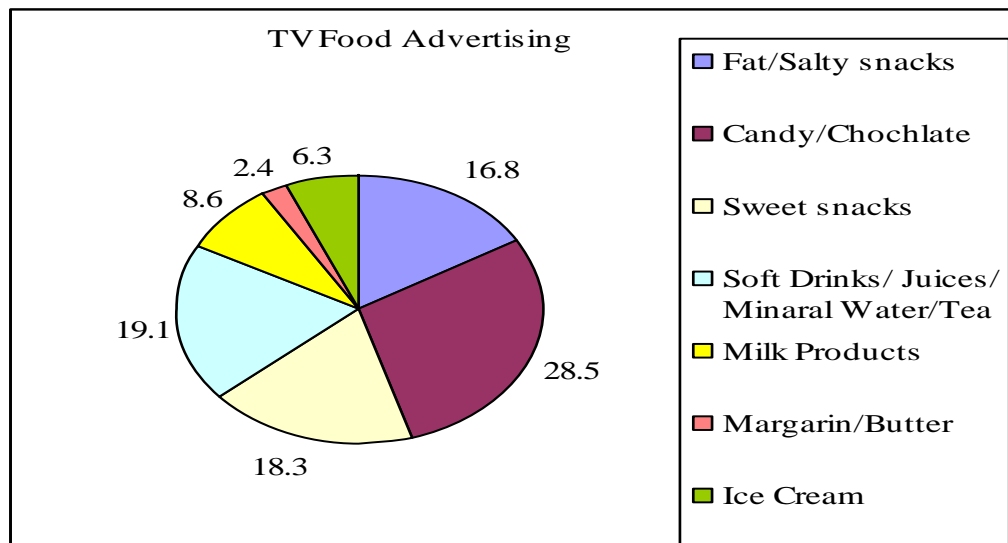


Figure 2. Relative distribution of broadcasted food advertisement in TV at the day before interview.

food advertising techniques and channels are implemented to reach the children and adolescents in order to develop brand awareness and encourage the sale of products (Kraak and Pelletier, 1998; Story, 2004). Children nowadays are different from the previous generations in many ways, may be one of the main factors which influences the young children nowadays is the TV advertisements. Advertisement plays a crucial role in society (Mahmood, 2008; Crane and Kazmi, 2010). It has also close ties with certain responsibilities. We understand that our commitment and responsibility is specifically important regarding the advertisement targeting children of different ages. As several scholars

(Morton, 1990; Hill and Radimer, 1997; Bredbenner, 2004) argue, in spite of this shared concern of advertising impact on children around the world, scientists, committees, and journal articles are proposing that marketers targeting advertising towards a child is unethical. Figures 1 and 2

Our study showed that mothers' educational level was correlated with students' affection by TV advertising for brand preference and choices, food purchases and intake. Crawford et al. (1995) and Patrick and Nicklas (2005) also revealed that maternal educational level was inversely related to children's eating habits. A positive and negligible correlation also was observed between the

mothers' occupation and the students being influenced by TV advertising. Rasmussen et al. (2006) in a review literature and evaluating 11 related papers found a positive relation between the parental occupation and their children's behaviour regarding the food consumption. It meant that housewife mothers were accepting their children's request for purchasing food products based on TV commercials more than the employee mothers.

On the other hand, several researchers (Bredbenner and Darlene, 2000; Clancy et al., 2002) assert that the continuous advertisement of high-calorie food may lead to the epidemic of childhood overweight and obesity in the United States by encouraging preferences for junk. It also contributes to developing poor eating habits. There is also a vital need for ordaining particular regulations for the food advertisement in Iranian TV channels targeting children.

## Conclusion

Since almost all recorded food advertisements do not support the Iranian dietary recommendations for healthy and balanced eating particularly for children, more activities to reduce the unhealthy food promotion to children are needed as restrictions by type of advertised food, target group or limits on the advertisements' account and times shown. The researchers in this study propose an approach for the active promotion of the choice of healthy food from the time of birth onwards. It will be efficient provided that the various social and environmental structures, stakeholders, policy makers, food and advertising industries, governmental and non-governmental institutions and organizations, media, schools, health experts and the society as a whole, accept this as a vital tool in their fight against the advertisement of unhealthy food products.

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