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## FOOD ADVERTISING WATCHED BY ADOLESCENT GIRLS IN SAUDI ARABIA

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### **Abstract**

*Purpose:* To explore the nature and contents of food advertisements aired on popular television channels most watched by Jeddah adolescent girls.

*Design/methodology:* The content of 288 hours of television programming was videotaped in 2009. All product advertisements were abstracted from the programmes and analysed quantitatively in terms of frequency, duration, type, means and ways of delivering the message to the viewers. Foods advertised were classified as food/beverages high in fat, salt/sugar (HFSS) and non-HFSS foods according to the nutrient profiling model described by the Food Standards Agency (FSA-UK, 2005).

*Results/findings:* Saudi adolescent girls (13-18 years) could watch up to 21-aired product advertisements for every hour they watch TV and these adverts amounted to 9.6. Food and drink-related products accounted for roughly 18% (n=1106) of advertising exposure (n=6,272), and 70% of food adverts were for HFSS products. No significant difference ( $P=0.26$ ) in the duration of adverts for non-HFSS (3.53 hours) and HFSS (3.43 hours) was found. It was noted that HFSS food advertisements were mostly presented by young adult actors, and the use of persuasive methods such as presenting food adverts with identification of sponsorship, price incentives, free gifts and celebrity endorsement was higher for food products targeting young audiences than those targeting adult audiences ( $P<0.001$ ).

*Social implications:* The study revealed that adolescent girls are exposed to a plethora of food advertising that promotes unhealthy eating. This could



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have an impact on their diets and long term health outcomes and therefore warrant further evaluation.

*Originality/value:* The study presents the first descriptive analysis of television advertising viewed by Saudi adolescent girls; other studies in the region have not collected and analysed the data processed here. The results emphasize the central role and obligation of decision makers in protecting young consumers through tightening legislation and controlling media contents (particularly food adverts) targeting young people.

**Keywords:** Adolescents, Teenagers, Food advertisements, Food marketing and commercials, High Fat, Salt and Sugar - HFSS

## **BACKGROUND AND AIMS**

The media has an important role to play in forming attitudes to nutrition in young people. Food advertising is considered to be a factor influencing adolescents' eating behaviours, encompassing food preferences, consumption choices and purchases. Many food advertisements can be considered obesogenic as the foods they promote are high in sugar and fat content (Story and French, 2004). Research has found strong associations between increases in advertising for unhealthy foods and rates of childhood obesity, and the World Health Organization in 2003 has documented food marketing as a crucial area of focus on the prevention of obesity in young persons. Swinburn & Shelly (2008) concluded that regulating the marketing for energy-dense foods and beverages on TV could reduce the effect of TV viewing on weight gain. In Arab countries, research on obesity has considered different factors such as cultural and environmental factors, including TV viewing (Musaiger, 2000).

Social, cultural and political forces are important factors to consider when studying or analysing media and its relation to Arab youth, but religion is probably the most influential. While Saudi Arabia is a particularly conservative country, lifestyle in the Kingdom is ultramodern and high technology. For example, in 2001, 99% of Saudi households were reported by Euromonitor statistics to own a colour TV and 23% to own a personal computer (Rice, 2004).

Among children and adolescents, television viewing is a fundamental leisure-time form of entertainment (Swinburn and Shelly 2008). While the hypermedia space involves various media and information technologies, television remains the dominant medium for Western (Story *et al.*, 2002) and Arab youth (Kraidy, 2006). It is also considered the largest source of food-related messages, especially for younger children (Story and French 2004). In Saudi Arabia, 61% of young girls rely on television as a source of knowledge about health, including food and diets (Al-Almaie, 2005).

Previous generations of some ethnic groups, particularly Saudis, grew up in a world where there was only one state television channel. The state television channel does not or only rarely airs advertisements. However, the current Saudi teenage generation can choose between more than 200 satellite television channels, which are saturated with commercial messages (Marwan *et al.*, 2008).

The impact of globalization on the media is evident in Arab satellite channels. Most of the TV channels are in the Arabic language but are saturated by Western ideas and values (Khalil 2005). Some programmes that are related to food and “weight” issues increase adolescents’ exposure to foreign culture and consequently may influence food habits, and cause them to alter their views and behaviour. The marketing of beauty and body-related industries including the fitness industry, the diet industry, cosmetic surgery and products and services to achieve ideal weights is extremely widespread in the Arab media. All these body-related industries are promoted and marketed through global, regional and national mass media, which may encourage disordered body image perception to be spread among women (particularly young women) throughout the country of Saudi Arabia.

Because of cultural and political factors in developing countries including the spread of Western eating habits, children in developing and emerging economics are widely targeted by fast food marketing and marketers use the same techniques used in developed countries (Hastings *et al.*, 2006). These include emphasis on television advertising, creative themes of fun, excitement and animation for young children, sports sponsorship and celebrity endorsement, collectable toys and child-oriented distribution strategies (Hastings *et al.*, 2006).

In Saudi Arabia, aggressive food advertising and marketing, through television, the internet, and mobile technology, target young Saudis

(Kraidy, 2006). Currently, food producers use advertising on the TV channels most frequently viewed by Saudis, including teens. Advertising is important on both the national television channels and other regional satellite channels, e.g. Middle East Arab television. The foods advertised on these channels are generally nutrient-poor foods. In addition, fast foods are highly promoted on these channels, and traditional family mealtimes have become outdated for these children.

Saudi Arabia is considered the largest market in the Arabian Gulf region, which offers investors and exporters many opportunities, including food marketing and advertising (Rice, 2004). Many products that are easier to consume on the run, more convenient to prepare, and/or are specifically designed for older children have made food easily available in a variety of places, e.g. vending machines and gas stations. In a report based on a Jeddah survey on snack foods, the United States Department of Commerce & Department of Agriculture (2011), reported that Saudi Arabia has about 25 producers of snacks. Saudi retail outlets, such as supermarkets and corner stores, sell more than 60 different brands of savoury snacks. Two-thirds of these are local brands, and several other are US-origin brands. There are more than 55 local brands on the market and salted snacks are the most widely available snacks in the Saudi market.

Many countries have already recognized the importance of controlling media content directed at young people through legislation and some have already established regulations related to food advertising directed at children and adolescents (Caraher and Landon, 2006). According to Hawke, in 2004, none of the Arabian Gulf countries including Saudi Arabia follow any type of regulations regarding food advertising aimed at children and adolescents (Hawke, 2004).

Some Saudi research has reported a relationship between screen time and health problems such as obesity. For example, Al-Hazzaa (2002) associated television viewing by Saudi youth with obesity and lack of physical activities. However, there is no published research examining the extent, characteristics and content of food advertisements on Saudi television channels. In this study, I was interested in examining and determining the extent and nature of food advertisements on television channels preferred by Saudi girls using objective data in a defined period.

According to a large survey on the nutritional status of adolescent girls (n=1519) in Jeddah city conducted by Al-Jaaly *et al.* (2011), the private free-to-air Arab satellite channels from the Middle East Broadcasting Centre (MBC) 1, 3 and 4 were the most viewed channels by 60 per cent of participants (n= 912 out of 1519).

A descriptive analysis of all advertisements during television programming from the three channels was conducted to assess the advertisements in terms of frequency, duration, type, means and ways of delivering the message to the viewers. This comprised a total number of 6,272 advertisements (4,973 advertisements on channels 1 and 4 and 1,299 advertisements on MBC 3). TV food/beverage advertisements were quantitatively analysed through an approach that was modelled, with permission, on the study of Galcheva *et al.* (2008).

Data were collected using two processes:

1. The recording of TV networks
2. The viewing of TV programming and television advertisements inside programming

The three TV channels were recorded during the week 18 to 25 March, 2009 and from 27 to 29 October, 2009. The pooled samples included a total of 288 hours and the same method of recording and analysing was used for both periods. Recording of programming was from 14:00 to 2:00 am on weekdays (Saturday to Tuesday, Jeddah central time) and from 14:00 to 14:00, on the following day during weekend days (Thursday and Friday) when school adolescents are most available

**Table 1:**  
Number of viewers, total hours of recording and the number and percentage of advertisements in each recorded MBC TV channel

TV Channel	Number of Viewers#* n= 1519	Recorded time in hours	Number of advertised products*
MBC1	851 (60)	120	1784 (28)
MBC3	392 (31)	48	1299 (20.7)
MBC4	492 (38)	120	3189 (50.8)

# Most of the survey participants watched more than one channel  
\* Data reflects frequencies & (%) unless otherwise indicated

for TV viewing. The two periods were chosen because there was no public or school holiday.

During the viewing process details of name, duration, and type of programme (animation, show, TV game, children's serial/movie, general audience soaps/serial, movies, educational programme, social programme, sports, news) were initially taken. Other information included the day of recording, the TV channel, the viewing hours: early morning (06:00-09:30), late morning (9:30-12:30), afternoon (12:30-18:30), night time (18:30-24:00), very early mornings (00:01-05:59). Notes of breaks that include time and location of each break (before, inside, or after the programme) in addition to the number of advertisements in each break were taken. All advertisements were abstracted from the recorded data for each network, viewed individually, and their characteristics were analysed using several signs and codes. The same coding system as Galcheva *et al.* (2008) was used with permission from the main author, and modifications to the system were made according to the needs of the present study.

In order to identify the characteristics of televised food advertisements and the marketing strategies used to appeal, persuade and stimulate the purchase request, some signs and codes were used. Signs and codes included the name of food products, the length of each food advertisement, the time of screening and the type of the promoted food/drink (HFSS/non-HFSS). Other signs and codes include the format of food advert (animated/non-animated/mixed), composition and characteristics of product, marketing methods and associations used to appeal, persuade and stimulate the purchase request, direction to the children/adolescents/adults/general audience, human characters participating in the advert (age, sex, body size, health and appearance, shown eating while advertising the food product, etc.

### **FOOD GROUPING**

All food/drinks' advertisements were individually categorised into different groups, which were adapted from the food code list that was used in the British survey (1997) "National Diet and Nutrition Survey: young people aged 4 to 18 years" (Smithers, 2000). Regrouping and modification to some food groups were made for the present study. In addition, food and beverage products were classified as high in saturated fat, sugar or salt (HFSS) and non-HFSS according to the UK nutrient profiling (NP) model used by the Food Standards Agency (FSA 2005).

The NP model approach was developed previously to help support the UK communications regulator (Ofcom is responsible for regulating TV and radio sectors, fixed line telecoms, mobiles and the airwaves over which wireless devices operate in the UK).

## DATA ANALYSES

Data management and analysis were performed using SPSS 18.0 (2009) and analysis included two parts:

1. A description of all advertisements (n=6,272) to define their types as food, non-food or PSA (Public service announcements or advertisements), followed by a description of food advertisements which involved coding of the aired food advertisements (n=1,106).
2. The nutritional analysis of advertised foods to either HFSS or non-HFSS using the nutrient profiling (NP) model, and variables included serving size (100 gm or ml), and its nutritional contents such as energy, saturated fat, total sugar and sodium in addition to the presence of fruits, vegetables and nuts in the food (Rayner *et al.*, 2004).

## RESULTS

The mean duration of advertisements was 26.5 seconds with a range of 2 to 740 seconds. The sampled programmes contained 6,272 advertisements, which were transmitted in 46.2 hours (166261 seconds). Product advertisements represented about 82% (n=5,150) while 18% (n=1,122) were either for TV promoting programme advertisements or for public service announcements or advertisements.

Of the total number (5, 150) of the paid product advertisements, 21.5% (n=1,106) were for food/drink products, which corresponded to 6.96 hours/288 hrs. The maximum duration was allocated for meat and meat product advertisements (82.5±43.3 seconds) while fruit and nut advertisements had the minimum broadcast time (16.3±6.5 seconds). Table 2 reflects the time allocated for each food category.

### Food and drink items promoted by the three TV channels

The leading categories of food advertised on the three channels included milk and milk products (19.4%, n=214), followed by sugars, preserves and confectionery n=198 (18%). The proportion of total beverages such

as water, tea, and coffee was 13.3% and for cereals and their products it was 11.9%, n=131. Carbonated beverages and fruit drinks shared almost the same percentage of advertisements 4.4%, n=49 and 4.7%, n= 52 respectively. There were 83 advertisements for restaurants and advertising for fast-food outlets was higher (83%, n=59), compared to regular or traditional food restaurants (17%, n=12). Other items represented around 5% of the advertisements or less than 5% for each one (presented in Table 3).

### **The characteristics of televised food advertisements and techniques used in advertising**

Food and beverage advertisements included some health-related messages, e.g. addition or fortification of the product with vitamins and minerals (37%), the provision of natural essential nutrients (25%), and the inclusion of basic health messages was noted (29%). Based on the researcher's evaluation, the character's body size appeared to be mostly (91%) average. Only a small proportion of characters appeared to be overweight (0.4%) while none of the characters could be evaluated as underweight. Most of the advertisements featured both genders (73.4%). However, a higher proportion of female actors (24%) presented advertisements, compared to male actors (17%). Adults (46%) presented most of the advertisements, with a small proportion presented by children (0.5%). Adolescents (11%) presented adverts either alone or in combination with other age groups. The majority of advertisements (67%), were evaluated as targeting general audiences in TV channels other than the children's channel (MBC3), the total promoted advertisements that were directed at children or adolescents was significantly higher (28%) than those directed solely at adults (5.3%).

Promotional techniques used to persuade children and adolescents were as follows: advertisements were mostly animated and presented by cartoon characters. Often, they were presented with identification of sponsorship, price incentives, free gifts and celebrity endorsement. Showing characters while eating was common in 85% of the aired adverts. The second most frequent marketing method was to associate advertisements with excellent taste (24.5%), while physical activity or pleasure had a share of 12%.

Clearly, the extent and nature of food advertising directed at young people (either those included in children programmes or specific

products for young group in adult programmes) was statistically different from those directed at other age groups (general audience or adults),  $P<.001$  (Table 4). The average number of breaks per programme, number of adverts per break and the mean time for advertisements during programming was significantly lower for the younger group compared to other age groups'  $P<.001$ .

### Nutritional analysis of the advertised foods based on HFSS or non-HFSS using nutrient profiling (NP) model

Among the 1,106 food adverts, 65 food and drink items were analysed. The analysis on the three channels included 42 per cent ( $n=27$ ) classified adverts to either HFSS or non-HFSS, while the rests of adverts were unclassified due to the unavailability of the item in the local market or missing/incomplete nutrition labeling. Of the classified items, 70 per cent were HFSS foods, while the rests were non- HFSS.

Commercial categories of food items	Mean $\pm$ SD (seconds)	Minimum	Maximum
Cereals and cereal products	19.4 $\pm$ 11.4	3.0	40.0
Milk and milk products (milk, yogurt, cheese, Ice cream, and coffee whitener)	23.8 $\pm$ 15.9	3.0	73.0
Fat spreads (butter, margarine & oils]	17.7 $\pm$ 14.0	6.0	35.0
Meat & meat products (beef, lamb, chicken, burgers & kebabs, sausages and meat pastries)	82.5 $\pm$ 43.3	45.0	120.0
Vegetables, potatoes & savoury snacks	30.3 $\pm$ 2.3	29.0	35.0
Fruits & nuts	16.3 $\pm$ 6.5	12.0	30.0
Sugars, preserves & confectionery (sugars, jam, honey, choc. spread, gums, chocolate bars)	24.9 $\pm$ 13.6	5.0	72.0
Total drink (fruit drinks)	22.3 $\pm$ 13.0	5.0	35.0
Total drink (carbonated beverages )	27.1 $\pm$ 6.7	10.0	40.0
Total drinks (water/coffee/ tea)	17.8 $\pm$ 9.0	5.0	30.0
Miscellaneous (beverages)	10.6 $\pm$ 8.0	5.0	30.0
Miscellaneous (soups)	21.7 $\pm$ 7.7	10.0	36.0
Miscellaneous (sauces, condiments, mayon- naise, ketchup, herbs, spices)	36.8 $\pm$ 9.5	25.0	60.0
Restaurant food	33.8 $\pm$ 8.3	10.0	45.0

**Table 2:**  
Allocated time for  
each food categ

Commercial categories of food items	Number of adverts	Food advertising watched by adolescent girls in Saudi Arabia  <div>258</div>
Food type [n=1,102 (99.6%)]		
Cereals & cereal products	131 (11.9)	
Milk & milk products	214 (19.4)	
Fat spreads (butter, margarines & oils)	39 (3.5)	
Vegetables, potatoes & savoury snacks	27 (2.5)	
Fruit & nuts	62 (5.6)	
Meat & meat products (beef, lamb, chicken, burgers & kebabs, sausages and meat and pie pastries)	4 (0.4)	
Sugars, preserves & confectionery (sugars, jam, honey, gums, chocolate spread, chocolate bars)	198 (18)	
Total drink (fruit drinks)	52 (4.7)	
Total drink (carbonated beverages )	49 (4.4)	
Total drinks (water/ coffee/ tea)	147 (13.3)	
Miscellaneous (beverages)	42 (3.8)	
Miscellaneous (soups)	20(1.8)	
Miscellaneous sauces, condiments (sauces, mayonnaise, ketchup, herbs, spices)	6(0.5)	
Infant and children milk formula	47(4.3)	
Restaurant food [n= 71(5.8)]		
Fast food outlets	59 (83)	
Traditional food restaurants (non-fast foods)	12 (17)	

Table 3:  
Distribution of food  
advertisements  
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Variable	Target group (Mean± SD)			
	Young	Adults	t Value	P Value*
Number of adverts' breaks per TV programming	3.49±1.88	4.82±2.43	t(1098) = 8.64	<.001
Number of adverts per break	8.84±3.93	9.50±3.50	t(497.5)=2.580	<.001
Duration of advertisement	17.3±11.85	25.03±13.56	t(1407) = 9.21	<.001

\*P Value is significant at <0.05

**Table 4:**  
Food  
advertisements'  
characteristics  
directed to young  
people and adults

Based on the analysed television channels, up to 21-aired product advertisements (over 9.6 minutes in every hour of programming) could be viewed by adolescents aged 13 to 18. Among total non-programme content time, food and drink-related products accounted for roughly 18% of advertising exposure (n=6,272). This compares to 13% of total advertising time for the food seen by children in the United Kingdom in the same year (Ofcom 2009). Of the total 1106 food and drink advertisements, 70% of the analysed food advertisements were for products that were high in fat, sugar or sodium (HFSS), or low in nutrients. Compared to the USA, the proportion of HFSS foods in the present study is lower (70% vs. 90%), (Batada *et al.*, (2008). The researcher was not able to analyse most of the advertisements (58%) because most of the products had no list of ingredients or nutritional breakdown on their labels, which confirms the importance of including such legislation in Saudi Arabia. The present study showed that only 27% of food advertisements directed at Saudi children, and adolescents contained health and/or nutrition or physical activity messages, compared to 50% for Batada *et al.* 2008 in their USA study.

The most popular snacks in Saudi Arabia are savoury snacks. This is in addition to some types of confectionary and chocolates. The present study noted that the highest proportions of advertisements were devoted to sweets, beverages and confectionery, which accounted for 18% while cereal advertisements made up 11.9% and were mostly broadcasted to children in MBC3 (children's channel).

A significant difference was found in the promotional techniques and channels used by food marketers between those directed at children and young people and those directed at adults. The different marketing strategies that were used to stimulate the purchase request of younger viewers were in agreement with the promotional methods found in other studies that were conducted in developing countries. The evidence also shows that marketers in developing countries follow the same methods used in developed countries (Cairns *et al.*, 2009). However, young people in Saudi Arabia are expected to watch significant levels of adult programmes and so further consideration must be given to addressing this. Ofcom (2004) found that most of the television advertising seen by children is outside children's airtime.

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## IMPLICATIONS AND RECOMMENDATIONS

1. Many food products and diets are promoted in TV food advertising. To control this potential, young Saudis need to understand messages in these advertisements. Therefore, media literacy is an important subject to be included in the curriculum. This could help young groups and their families to be less confused about the promoted food products.
2. This paper generates vital data, which can create some recommendations for developing public policies to regulate food marketing on television and to further regulate its harmful impact on children and adolescents.
3. Policy makers and health professionals in Saudi Arabia should work with the media to raise their awareness of health issues and the regulation of media content.
4. Consideration should be given to emphasize food-labelling legislation in Saudi Arabia. The food industry and their advertising partners should cooperate with other institutions and sectors, such as schools and health sectors, to control the types and quantities of HFSS products they produce and market.
5. Ongoing follow-up studies should be carried out to evaluate the application of policies and procedures concerning the guidelines and regulations of food advertising.

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