Health Information and Advertising Appeals in Food Commercials: A Content Analysis

Kara Chan*, Vivienne Leung and Lennon Tsang

Department of Communication Studies, Hong Kong Baptist University, Hong Kong

Abstract: A content analysis of 311 food commercials broadcast on television networks in Hong Kong was conducted. There were nearly equal proportions of ads for healthy and unhealthy foods. The three most frequently used advertising appeals were taste/flavor/smell/texture, health/wellbeing and physical performance/speed/strength. Altogether 54 percent of the food ads contained health-related claims. Intriguingly, 23 percent of the ads for unhealthy food contained health-related claims. The prevalent use of general health claims in unhealthy food ads calls for policy makers to devise better ways to regulate health claims in food advertisements. This is the first content analysis of health and nutrition information in food advertising arising from a society with a rich herbalist tradition.

Keywords: Children, Television, Nutrition, Diet, Healthy Eating.

INTRODUCTION

Television is a major socializing agent for children and youths about food, nutrition and health [1]. Food advertisements have significant influence on knowledge, attitudes, and behaviors about dietary choices. They can educate consumers about the nutrient content and health implications of foods and they have the potential to promote healthy foods and lifestyles [2]. Food advertisements are worth examining because of their potential association with obesity [3]. A review of content analysis studies on food advertisements found that unhealthy food categories such as ready-made breakfast cereals and low-nutrient beverages dominated the prime-time as well as children’s television programs. The advertisements for unhealthy food items often adopted emotional appeals that focused on fun, mood alteration, and taste. Because of the vast number of adults and children watching television, it is important that nutrition educators learn what messages related to nutrition and health are presented in the media [4]. The current study conducted in Hong Kong provides empirical evidence about the health and nutrition information communicated to consumers through television advertisements. Results of the study can provide guidelines for policy-makers and health educators for decision making about the regulation of food advertising and the design of messages to counteract advertising effects.

LITERATURE REVIEW

Food advertising has the potential to influence food consumption and establish social norms related to eating [5]. Televised food advertisements encouraging specific food products form a de facto set of dietary endorsements [6]. As a result, there is much attention given to the study of nutrition information, persuasive appeals, and profiles of food advertising. Food advertising on television was frequently studied because of the demonstrative power of television, the huge size of the audience, and the potential to have impact on the child segment.

This section reviews previous studies on content analysis of food advertising on television. We first review content analysis studies of television programs for adults and children, then studies of television programs primarily for children. Content analysis of food advertisements in the print media are not included. It follows with a brief introduction of food advertising and its regulation in Hong Kong.

In a longitudinal study of prime-time television food advertising from 1971 to 1998 in the US, it was found that the “prime-time diet” was composed of mostly low nutrient density foods such as fast-food fare, low nutrient beverages, as well as sweets and desserts. Over 85 percent of food commercials adopted consumer-related promotional claims, such as those emphasizing flavor, quality, and value-for-money. Less than 45 percent of food commercials adopted nutrition-related claims. A content analysis of US Saturday morning programs in 2004 found that the food advertised failed to meet nutrition guidelines and encouraged nutritional imbalance. The food diet on TV recommended 25 times the recommended daily servings for sugars, and 21 times the recommended daily servings for fat. The same food diet on TV also recommended only 40 percent, 32 percent, and 27 percent of the recommended daily servings for...
vegetables, diary, and fruits respectively [6]. A content analysis comparing types of health and nutrient content claims in prime-time Spanish and English-language television advertisements that targeted women aged 18 to 35 years in US found that food advertisements broadcast during prime-time were more frequently high in fat, sodium, or added sugars, or low in nutrients. In Australia, 16 percent of the sampled advertisements contained health-related nutritional claims [8]. A recent study of 93,284 food advertisements aired on Australian television found that 16 percent of the sampled advertisements contained negative themes. The most frequently adopted negative themes were mood enhancement and food craving. Advertisements with negative themes appeared most frequently for non-core foods as well as being broadcast during children viewing times [5].

Another study compared food advertisements in prime-time television for the general market and for the African American television programs [8]. It was found that food advertisements broadcast during African American programs contained a higher proportion of advertisements for fast food, candy, or soda. Food advertisements broadcast during general market programs contained a higher proportion of advertisements for cereals, grains and pasta, as well as fruits and vegetables. About one-sixth of all sampled commercials contained a weight-related nutritional claim [8].

Given the powerful impact of television advertising on children's food attitudes, some of the content analysis studies focused on food advertisements broadcast during children's viewing hours. A study of 28 hours of US children television programs in 2005 found that the most frequently advertised food categories were breakfast cereal and cereal bars, restaurants, and snackfoods. Altogether, 91 percent of food advertisements were for foods or beverages high in fat, sodium, or added sugars, or low in nutrients. In terms of promotional strategy, 74 percent of the sampled ads featured cartoon characters, and 26 percent featured toys or other giveaways [9].

Similar results were found by a random sample of 1,130 advertisements appearing during children viewing hours in English- and Spanish-language networks in 2005 and 2006 [10]. Altogether, 70 percent of food ads were for food categories high in sugar or fat. Ads for fruits and vegetables comprised only 2 percent of the sample. Only one nutrition-related public service announcement was found for every 63 food ads [10]. Food televised advertising over children viewing hours in New Zealand also contained high percentages of food categories that were contrary to nutritional guidelines [11].

Moon (2010) [2] studied food advertising on television targeted at children in Korea. The results showed that these advertisements encouraged the consumption of unhealthy foods using sensory and emotional appeals such as taste, smell or mood alteration. Food advertisements seldom carried health information. Some ads put an emphasis on “health” without making explicit substantial claims on nutrition contents. Some presentations of health-related claims are misleading for a child audience [2]. Cheng and his colleagues conducted a content analysis of 1,355 Chinese and 1,711 American commercials broadcast during children's programs. The results revealed that emotional appeals occurred more often than health- or nutrition-related appeals. This US sample of advertisements had a higher percentage of high-calorie/high-sugar foods than the Chinese sample [12].

Food advertisements targeted at children, put much emphasis on emotional persuasive appeals [2, 3, 13]. Among the persuasive cues, immediate sensory gratification (e.g., fun, hedonic cues; giveaways) and attention-getting devices such as animation, live-action effects as well as sound effects were frequently employed [14-17]. Persuasive cues such as taste or smell, and emotional appeal such as mood alteration were found most frequently in food advertising targeted at children [13]. The most popular appeals used in food advertising were hedonistic, emphasizing taste, humor, fun and action-adventure [18]. The commonly assumed prevalence of calls to pester parents to make purchase, or celebrity endorsements were not supported. Sales promotions such as giveaways or competition prizes were frequently used to advertise cereals and fast food [18]. To conclude, food advertised on television were often not nutritious, and these advertisements often used emotional appeals to encourage consumption.

**Food Advertising and its Regulation in Hong Kong**

In Hong Kong, the food and beverages product category accounted for about 8 percent of total advertising spending in 2011. It was the second largest category after banking and investment services [19]. Among all types of food advertising, health supplements are heavily promoted. This is because in Chinese culture, the efficacy of a macrobiotic diet is based on the principle of “Yin” and “Yang” balance [20]. Intake of various tonics and supplements is believed to
be able to raise the flow of energy in the body and
maintain body homeostasis [21]. In a survey about
health supplement consumption in Hong Kong, over
one third of adult respondents had consumed health
supplement products within the previous six months
[22].

Advertising claims relating to nutrition or the dietary
effects of products or services are subject to
government regulation. Advertisements for dietary
supplements must not state or imply that are necessary
as additions to a balanced diet [23]. According to a
compulsory nutrition labeling scheme for food
introduced in July 2010, all prepackaged foods and
beverages sold in Hong Kong must be labeled with
their energy value, protein content, available
carbohydrates, total fat, saturated fatty acids, sodium,
sugar, and the content of any other nutrients [24].

In view of the importance of food advertising to
public health and the power of the television medium,
there is a need to study the health information
contained in televised food advertisements. This study
addressed four research questions.

RQ1: What is the proportion of healthy and unhealthy
food advertised on television in Hong Kong?

RQ2: What types of persuasive appeals are
employed in television food advertisements?

RQ3: What types of health-related claims are made in
television food advertisements? Specifically,
how frequently are claims about Chinese herbal
substance made in these advertisements?

RQ4: How are health-related claims presented in
television food advertisements?

METHODOLOGY

Sample

The sample of ads was collected from an online
archive of advertisements provided by the admanGo
company. It covered two specific time frames: October
to November, 2010 and April to May, 2011. These four
months were selected to reflect seasonal variations in
food advertisements. The four product categories
examined were food, beverages and restaurants;
pharmaceuticals and healthcare; beauty products; and
hotels and entertainment. Only advertisements for
edible products were studied. Advertisements for
medications were excluded. Duplicated commercials
were included only once to eliminate bias from the
broadcast frequency of commercials. A total of 311
commercials were downloaded and analyzed. All the
ads lasted from 5 to 60 seconds.

The sample for this study included only
advertisements broadcast on paid or free-to-air local
television channels. Global television channels such as
Discovery channels were not included. Television was
chosen because television accounted for the highest
share (35 percent) of total advertising expenditure
among all media in Hong Kong [25]. Using one single-
medium is justified as this is an exploratory study.
Future study will examine and compare other media
such as newspapers and magazines.

Coding

The coding frame (see Table 1) was adopted from
categories, 18 persuasive appeals, 5 general health
claims, 15 nutrition/substance claims, and 3 types of
nutrition/substance claims. Following the coding
method suggested by Moon (2010) [2], the eleven
product categories were classified as either healthy or
unhealthy foods (see Table 2 for the classification). The
“restaurant” category consisted mainly of fast food
restaurants. It was classified as unhealthy food
because none of the sampled advertisements put
emphasis on serving healthy foods. For advertisements
with nutrition or substance claims, the types of claims
and the manner of their audio-visual presentation were
coded. A pilot sample of twenty commercials (10%)
was coded by all three authors and a research
assistant so that the coders became familiar with the
coding frame. These ads were not included in the final
sample. A graduate research assistant employed for
the project and one of the authors coded all
advertisements independently. The inter-coder
reliability scores based on percentage of agreement
ranged from 0.70 to 1.0 (see Table 1). All
disagreements were resolved through discussion, and
a final decision was made by consensus between the
coders.

FINDINGS

Product Types

The sample contained almost equal proportions of
ads for healthy and unhealthy food (see Table 2). This
answers our first research question. Health
supplements/water was the category most frequently
advertised, followed by family/fast food restaurants and desserts/candies/sweets. These three food categories accounted for 68 percent of all sampled advertisements.

Appeals

The three appeals used most frequently were taste/flavor/smell/texture, health/wellbeing and physical performance/speed/strength. The three appeals least used were peer acceptance/superiority, magic/fantasy and action/adventure (see Table 3). None of the advertisements used a trickery/deceit appeal. Chi-square tests showed that advertisements for healthy and unhealthy foods tended to adopt different persuasive appeals. The appeals used most frequently in ads for healthy food were health/wellbeing, physical performance/speed/strength, taste/flavor/smell/texture.
and nutritional content. Ads for unhealthy foods most often used taste/flavor/smell/texture, mood alteration, health/wellbeing and newness. Ads for unhealthy foods were also more likely to employ quantity/size/amount appeals. This suggests an answer to our research question 2.

**Health-Related Claims**

Of the 311 advertisements studied, 170 (54.7%) contained a health-related claim. Altogether 84 percent of the ads for healthy foods and 23 percent of those for unhealthy foods contained health-related claims (see Table 4). This suggests an answer to the third research question. General health claims were used more often than nutrition/substance claims.

Altogether, 76 commercials contained nutrition/substance claims that were classified as “others”. The four commonly used Chinese herbs/substances, including Ophiocordyceps sinensis, Lingzhi mushrooms, bird’s nest, and Ginseng, accounted for 31 out of the 76 mentions. Only commercials for healthy food contained nutrition claims of Chinese herbs/substances.

It was surprising to find that nearly one fourth of the ads for unhealthy foods made health-related claims. The health-related claim used most frequently in such ads was “good for health”. Six out of the 23 chi-square tests were significant at 0.05 level, indicating that the types of health claims used in ads for healthy and unhealthy foods were similar.

Of the 123 advertisements with nutrition/substance claims, only six made an “absolute claim” and one
made an “evaluative claim”. None of them used a “relative claim”. None of the other 117 advertisements contained specific information about the nutrition value of the constituents.

The Presentation of Health-Related Claims

About 89 percent of the health-related claims were presented both visually and orally in the same ad, five percent were presented with audio only (voice-over) and three percent were presented only visually. Health-related claims were also delivered in text (68.2%) and by a spokesperson (28.2%), including verbal endorsements from celebrity/authoritative endorsers. The figure for text presentation is probably specific to Hong Kong where Chinese subtitling is pervasive on television for audience who may not understand the Cantonese dialect.

DISCUSSION

Unlike studies in the US and Australia, the Hong Kong televised food advertisements contained a high proportion of healthy food categories. Over one-third of the sampled food advertisements were promoting healthy supplements and bottled water. The prevalence of health supplements indicates that the Hong Kong food market is adult oriented. Those adults are health conscious, and marketers are keen to encourage them to take health supplements to boost their health.

The appeals most frequently used in food TV advertising probably reflect marketers’ perceptions of consumers’ interests. The top three were taste, wellbeing, and physical performance. They reflect a mixture of both utilitarian and symbolic rewards expected from food consumption. Marketers try to make a clear distinction in user benefits between healthy and unhealthy food products. This is understandable, as marketers will try to emphasize each product’s distinctive features. It is interesting that sensual satisfaction was the third most frequently used appeal in ads for healthy foods. This may reflect a worry among marketers that consumers may perceive healthy foods as not very tasty. A previous study of

<table>
<thead>
<tr>
<th>Health-related claims</th>
<th>N = 170</th>
<th>Healthy food N = 134</th>
<th>Unhealthy food N = 36</th>
<th>Chi-square value</th>
</tr>
</thead>
<tbody>
<tr>
<td>General health claim</td>
<td>95.9 (163)</td>
<td>97.0 (113)</td>
<td>91.7 (16)</td>
<td>2.1</td>
</tr>
<tr>
<td>Good for health</td>
<td>70.6 (120)</td>
<td>72.4 (94)</td>
<td>63.9 (13)</td>
<td>1.0</td>
</tr>
<tr>
<td>Prevents illness</td>
<td>13.5 (23)</td>
<td>14.9 (19)</td>
<td>8.3 (5)</td>
<td>1.1</td>
</tr>
<tr>
<td>Fitness</td>
<td>12.9 (22)</td>
<td>14.2 (19)</td>
<td>8.3 (5)</td>
<td>0.9</td>
</tr>
<tr>
<td>Provides balance/variety</td>
<td>4.7 (8)</td>
<td>5.2 (7)</td>
<td>2.8 (2)</td>
<td>0.4</td>
</tr>
<tr>
<td>Gives energy</td>
<td>4.7 (8)</td>
<td>3.7 (5)</td>
<td>8.3 (5)</td>
<td>1.3</td>
</tr>
<tr>
<td>Nutrition/substance claim</td>
<td>72.4 (123)</td>
<td>74.6 (109)</td>
<td>63.9 (18)</td>
<td>1.7</td>
</tr>
<tr>
<td>Vitamin/mineral</td>
<td>19.4 (33)</td>
<td>20.9 (28)</td>
<td>13.9 (5)</td>
<td>0.9</td>
</tr>
<tr>
<td>Calcium</td>
<td>8.8 (15)</td>
<td>11.2 (15)</td>
<td>0.0 (0)</td>
<td>4.4*</td>
</tr>
<tr>
<td>Fiber</td>
<td>6.5 (11)</td>
<td>6.0 (8)</td>
<td>8.3 (5)</td>
<td>0.3</td>
</tr>
<tr>
<td>Pure/natural</td>
<td>5.9 (10)</td>
<td>3.7 (5)</td>
<td>13.9 (5)</td>
<td>5.3*</td>
</tr>
<tr>
<td>Fat</td>
<td>2.4 (4)</td>
<td>0.0 (0)</td>
<td>11.1 (3)</td>
<td>15.2**</td>
</tr>
<tr>
<td>Sugar</td>
<td>1.2 (2)</td>
<td>0.0 (0)</td>
<td>5.6 (1)</td>
<td>7.5*</td>
</tr>
<tr>
<td>Protein</td>
<td>1.2 (2)</td>
<td>1.5 (2)</td>
<td>0.0 (0)</td>
<td>0.5</td>
</tr>
<tr>
<td>Sodium</td>
<td>1.2 (2)</td>
<td>1.5 (2)</td>
<td>0.0 (0)</td>
<td>0.5</td>
</tr>
<tr>
<td>Calorie</td>
<td>0.6 (1)</td>
<td>0.0 (0)</td>
<td>2.8 (1)</td>
<td>3.7</td>
</tr>
<tr>
<td>Cholesterol</td>
<td>0.6 (1)</td>
<td>0.0 (0)</td>
<td>2.8 (1)</td>
<td>3.7</td>
</tr>
<tr>
<td>Light/lighter, Lean/leaner, Diet</td>
<td>0.6 (1)</td>
<td>0.7 (1)</td>
<td>0.0 (0)</td>
<td>0.3</td>
</tr>
<tr>
<td>Carbohydrate</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
<td>0.0</td>
</tr>
<tr>
<td>Caffeine</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
<td>0.0</td>
</tr>
<tr>
<td>Additive free</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
<td>0.0</td>
</tr>
<tr>
<td>Others</td>
<td>44.7 (76)</td>
<td>50.7 (71)</td>
<td>22.2 (9)</td>
<td>9.3**</td>
</tr>
<tr>
<td>Common Chinese herbal/substance†</td>
<td>18.2 (31)</td>
<td>23.1 (30)</td>
<td>0.0 (0)</td>
<td>10.2**</td>
</tr>
</tbody>
</table>

*Indicates significance at the p<0.05 (** p<0.01) level of confidence.†Including Ophiocordyceps sinensis, Lingzhi mushrooms, bird’s neat, and Ginseng. Each commercial can have more than one health-related claim.
Hong Kong adolescents showed that in general they perceived healthy eating as beneficial and desirable, but boring and not enjoyable [26]. There is a Chinese saying that “A medicine may taste bad but be good for the health”. In order not to associate healthy foods with medicine, food advertisers remind consumers that the healthy food advertised can satisfy their sensory needs.

The same thinking also applies to marketers of unhealthy foods. Over half of the sample of food ads was found to make at least one health-related claim. Over 60 percent of the ads for unhealthy foods with a health-related claim contained a general claim of being “good for health”. This should alarm policy makers. Hong Kong’s current advertising regulations have stringent restrictions on the use of claims regarding the nutritional value of food, and claims about the treatment effects of food products. However, there is no clear restriction in the current advertising regulations on making general health claims. In view of the prevalence of general health claims in food advertisements, it is time for the policy makers to revisit the issue and provide concrete guidelines about the use of general health claims. Evidence should be needed to justify such claims. And there is, an obligation to disclose related side-effects.

Chinese food culture places much emphasis on consuming food that matches the consumer’s individual physique. However, none of the food advertisements in the sample provided information about the types of physique that the food product is most likely to benefit. This is probably because television is a mass medium and advertising on TV is very costly. Marketers therefore need to appeal to the largest number of potential consumers. The consumers may get the impression that the food advertised benefits all physiques. That may lead to a mismatch between the consumer and healthy foods.

The sample contained nearly equal number of ads claiming Chinese herbal ingredients as those claiming vitamin ingredients. That finding indicates that any revised regulations must cover claims about Chinese herbs in advertisements.

Only seven of the ads made absolute or evaluative claims. The scarce use of absolute or relative claims in food advertisements indicates that food advertisers do not think consumers are ready to receive such information. It may be perceived as too difficult for consumers to understand. Perhaps the food advertisers would prefer to remain vague about specific nutritional content. Without a benchmark, consumers can easily be misled by claims such as “less sugar”. Policy makers should look into it, as most claims about nutrition and content are neither absolute nor benchmarked.

This content analysis study has two major limitations. First, content analysis is unable to generate information about the information processing of the ads by the audience. And second, the classification of healthy and unhealthy foods was based on broad food subcategories.

CONCLUSION

A content analysis of health information and advertising appeals used in television food advertisements was conducted. The food categories of health supplements/water, restaurants, and desserts/candies/sweets accounted for over two-thirds of the sample. There were nearly equal proportion of ads for healthy and unhealthy food categories. Healthy food ads put an emphasis on the product’s functional rewards while ads for unhealthy food emphasize emotional rewards for the consumers. Health claims are prevalent in health food ads, however a significant proportion of ads for unhealthy food also make health-related claims. The number of ads with specific claims about Chinese herbs was comparable to the number with specific claims about nutritive elements such as vitamins. The heavy use of general health claims indicates that there is a need for policy makers to set specific guidelines regulating them.

ACKNOWLEDGEMENT

This study was fully supported by Faculty Research Grant of Hong Kong Baptist University (Project no. FRG/10-11/211).

REFERENCES


Received on 27-08-2013 Accepted on 23-09-2013 Published on 31-10-2013

DOI: http://dx.doi.org/10.6000/1929-5634.2013.02.03.1

© 2013 Chan et al.; Licensee Lifescience Global. This is an open access article licensed under the terms of the Creative Commons Attribution Non-Commercial License (http://creativecommons.org/licenses/by-nc/3.0/) which permits unrestricted, non-commercial use, distribution and reproduction in any medium, provided the work is properly cited.