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‘JUNK FOOD’ PROMOTION TO CHILDREN AND ADOLESCENTS IN FIJI.

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Key Words: Children, Obesity, Food Policy, Survey, Advertising content analysis

Abstract

Objective:

To collect evidence on the exposure, awareness and effect of ‘junk food’ advertising and sponsorship upon children and adolescents in Fiji.

Method:

A questionnaire was developed and used with a sample of 88 primary school students and 103 secondary school students in Suva, Fiji and included questions about participants’ food preferences, nutritional knowledge and advert recall ability. Two free-to-air television channels were recorded for two weekdays and two weekend days from 6am-9pm, and the content analysed for advertised content. The amount of street advertisements in three defined localities was assessed. Sponsorship of events by ‘junk food’ products was assessed over the preceding twelve month period.

Results:

School children were able to identify multiple food products they had seen advertised. 94% reported that seeing adverts makes them want to try products. Seventy one percent had asked others to buy advertised products for them. There was evidence that food advertising contributed to incorrect nutrition beliefs. Levels of street and television advertising for ‘junk foods’ were high. Fourteen events sponsored by ‘junk food’ products were found to have taken place within one year of the investigation.

Conclusions: Children in Suva remember but misunderstand the nutritional value of advertised ‘junk foods’. Their diets are altered detrimentally as a result.

Implications: There is a need for a regulatory approach to limit ‘junk food’ advertising in Fiji.

INTRODUCTION:

Because of a significant worldwide rise in obesity among young people, the issue of advertising and promotion of ‘junk food’ has generated increasing amounts of public discussion. This has led to greater debate in government, and various forms of regulation on the advertising of ‘junk food’ have now become one of the most frequently discussed and proposed policy measures to address obesity in young people. 1

Several international reviews have linked television food advertising to childhood overweight and obesity through its influence on purchase requests and diets. 2 Previous research from Australia, New Zealand and internationally has found that advertisements for ‘junk foods’ comprised the majority of television food advertisements. There are also many other advertising media, such as internet and radio, which span across international borders resulting in the levels of advertising in Australia, Asia and the US, in particular, impacting on countries like Fiji. The high levels of advertising being seen globally has led many professionals to question the effectiveness of current advertising industry regulations in Australia, New Zealand and internationally. 3

The nutrition and disease transition is well-advanced in Fiji, with obesity rates rising rapidly, and obesity-related diseases now the leading causes of death. The most recent national survey found obesity rates of 10% in adult males and 26% in females. 4 Around 60% of all deaths have been reported to be due to heart disease, heart failure, stroke and hypertension. These largely preventable diseases carry significant costs in terms of their impact on individual lives, communities and health services. 5

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The Fijian Minister for Health, Dr. Neil Sharma, has publicly expressed concern about the extent of 'junk food' advertising and levels of obesity. The rise of diet-related disease has resulted from an increase in the intake of foods high in sugar, fat and salt, combined with a reduction in levels of physical activity. The dietary environment in Fiji has become highly obesogenic given the increased availability and accessibility to processed imported 'junk foods'.

In recent years, food and beverage industries around the world have begun to view children and adolescents as a major market force because of their strong influence on household food purchases, their purchasing power, and as future adult consumers. Children in developing countries have been shown to be less likely than children elsewhere to have a sophisticated understanding of the modern techniques used in advertising.

There is strong evidence to suggest that steering children away from commercial television may be effective in reducing childhood obesity. Consumption choices of children have been found to be influenced by the advertisements they see. Further evidence suggests that advertising is a contributing factor in childhood obesity, as non-commercial viewing, such as watching DVDs, has been found to have no significant association with obesity. While obesity has many drivers, controls on marketing consistently rate as a high priority strategy for addressing childhood obesity.

Governments around the world are recognising the importance of regulating the promotion of 'junk food' products to children. A review of regulatory strategies on food marketing to children in 59 countries found that 20 have, or are developing, policies in the form of statutory measures, guidelines, or approved forms of self-regulation. Government support for self-regulation is frequently accompanied by the statement that if it fails, then governments will take a regulatory route instead. This was a guiding principle suggested by the Preventative Health Taskforce in Australia, which recommended a self regulatory approach and that the food industry be given four years to phase out advertising of energy-dense foods on television before 9pm, or face legislation. Many countries, including Australia and New Zealand have general self-regulatory codes on advertising to children; however they do not specifically refer to food marketing.

The regulations provide general guidance or set limited restrictions on scheduling, but do not restrict the nature of the promotion. While government-approved forms of self-regulation have been the dominant response to this issue; statutory measures are increasingly being adopted. The UK has banned 'Junk Food' advertising during programs ‘of particular appeal’ to children under the age of 16. France has required nutritional messages on all food advertising since 2007, and Ireland has banned the use of celebrities in children’s food advertising and requires warnings on fast food and confectionary advertisements.

A number of countries have been actively discussing statutory actions, including Chile, Spain, Bosnia, Greece, Israel, Macedonia, Moldova and Serbia. An opportunity arose to examine the effect of food advertising to children in Suva, Fiji because of the interest of the interim Health Minister, through an organisation with interest and expertise in food and nutrition and obesity prevention (C-POND) and concern for local rates of obesity. The objective of this research was to investigate whether children and adolescents in Suva, Fiji are exposed to, aware of and affected by ‘junk food’ advertising and sponsorship through alteration in their food preferences or influencing their requests for purchasing of specific products, and to identify the scale of advertising and sponsorship of 'junk food' in Fiji via television, street advertising and sponsorship of events.

METHODS

All products advertised or identified were classified as either 'unhealthy' (termed 'junk food' in this report) or 'healthy' according to the Food Standard Australia and New Zealand (FSANZ) Nutrient Profiling Calculator, based on information on the labels of products. This system covers both food and non-alcoholic beverages. The Nutrient Profiling Calculator provides a points system to identify foods 'eligible to make health claims' in Australia and New Zealand. All foods and beverage products that failed to satisfy eligibility criteria were classified as 'junk food'.
Questionnaire:
A questionnaire was developed to investigate participant’s television consumption habits, product recall ability and whether adverts influence their food preferences and nutritional understanding. The questionnaire was developed based on similar surveys, and refined by a number of relevant academics. The questionnaire included both multiple choice and open-ended questions.

Selection Method and Sample Size: The Fijian Minister for Education randomly selected two schools, one primary and one secondary, with similar distributions of boys and girls, and an ethnic mix of Indigenous Fijian and Indo-Fijian students, reflecting Fiji’s overall demographic profile. The school principles identified appropriate classes to participate (in particular older primary school children as they were able to read and write without assistance), and distributed the questionnaires to these children (approximately 100 in each school). According to the school principles participation was almost 100%.

Data Analysis: Data from the questionnaires were entered into an EpiData data base and analysed using techniques for metric and non-parametric data. Comparisons were made in the analysis comparing results obtained from the primary and secondary school. Statistical significance was determined using a Chi Squared test. All products identified by the participants were classified as either ‘junk food’ or ‘healthy’ according to the Food Standard Australia and New Zealand (FSANZ) (2007) Nutrient Profiling Calculator.

Ethics and Privacy: Ethics clearance for this research was received from the La Trobe University Human Research Ethics Committee (FHEC10/110) and from the Fiji National Ethics Review Committee within the Fiji Ministry of Health. Written informed consent was provided from the parents/guardian of all participants prior to their completion of the questionnaire. Questionnaires were self-completed, and questionnaires did not include personally identifying information.

Review of Television Advertisements:
Method: To assess the level of ‘junk food’ advertising on terrestrial television in Fiji, a review was undertaken of the two free-to-air terrestrial channels: Fiji1 and Mai TV. In line with recommendations from the International Code on Marketing Food and Non-Alcoholic Beverages to Children, recordings were made between 6am and 9pm during two week days and two weekend days.

Data Analysis: The number and content of each advertisement was documented by the researcher. Based on information on the product labels, all advertised products were classified as either ‘junk food’ or ‘healthy’ according to the Nutrient Profiling Calculator. Advertisements for products that fell into the ‘junk food’ category referring to the product being ‘healthy’ or ‘good for you’ were identified.

Review of Street Advertisements:
Method: The number of street advertisements along Suva city’s main road (1.4km) and all street advertisements within an 805m radius around the participating primary and secondary schools were assessed on a single day. This was done by driving around the streets using a GPS to ensure all roads were included. All street advertisements for food and beverages were photographed and later classified and tallied.

An 805m radius (1/2 mile) around each school and the main road were chosen based on studies assessing other health-related advertising. An 805m radius (1/2 mile) has been frequently cited as walking distance to and from school in studies of transportation, and has been commonly used to characterise environmental contributors to health behaviours, including cigarette smoking, alcohol use and exercise. The 1.4km main road was also analysed as this is an area where people often visit, therefore repeated exposure of adverts is likely to be achieved.

Data Analysis: Street advertisements were classified into four categories; Sponsored Store Signs, Posters, Bill Boards and “Sponsored Other”. Details around each category are explained in Table 2.
Review of Sponsored Events:

Method: Events were searched for on-line and in advertising materials in news media for references to major events in Fiji sponsored by food or beverage companies linked to specific products occurring between August 2009 and August 2010.

Data Analysis: Data were recorded in a MS Excel spreadsheet. Sponsoring products were analysed using the nutrient profiling calculator and classified as either 'healthy' or 'junk food'.

RESULTS:
The self-administered questionnaire was completed by 191 students, 88 participants (46.1%), from the primary school aged 11-13 years, and 103 students aged between 14 and 18 years (53.9%) from the secondary school. Ethnicity was not recorded; however the Ministry of Education indicated that both schools included similar numbers from the two main ethnic groups. The results are presented by topic: exposure, awareness and impact.

Exposure:

Participant’s Exposure to Television
All students participating in the survey (n=191) reported having access to a television to watch. The majority of both primary (n=52/88: 59.1%) and secondary school participants (n=65/103: 63.1%) reported that they watched television (either paid, free-to-air or DVDs) every day of the school week (Monday to Friday). Secondary school participants were statistically more likely (p .03) to watch television on more days of the week than the primary school participants.

The number of hours of television participants reported watching on weekdays is summarised in Figure 1. On average the secondary school participants indicated that they watch television longer on weekdays than primary school participants (p .01). Primary school participants reported watching an average of 1.9 hours (95% CI 1.5, 2.3) per school day while secondary school participants reported to watch an average of 2.1 hours (95% CI 1.8, 2.4) per school day.

Participants also reported watching more hours of television per day during the weekend, indicating an average viewing time over both weekend days of 7.1 hours (95% CI 6.5, 7.7). Participants watched an average of 4.2 hours (95% CI 3.9, 4.5) of television on a Saturday. Less television was watched on Sunday, with participants watching an average of 3 hours (95% CI 2.7, 3.3). There was no statistically significant difference in the time spent watching television during the weekend between primary and secondary school participants (p .56). The vast majority of participants reported watching the free-to-air channels, with the majority (n=148/191: 77.4%) reporting that they watch Fijil and 40% (n=78/191: 40.8%) reporting that they watch Mai TV.

Figure 1: Hours of Television Watched on a School Day

Figure 2: Assessment of ‘Junk Food’ Street Advertisements.
Participants were also asked to indicate what they usually did during advertisement breaks, given the options summarised in Figure 3. The majority of participants reported that they pay attention to adverts by indicating that they “watch and listen”. It was found that primary school participants were more likely to pay attention to adverts (RR 1.32) than their older counterparts with 77.3% (n=68/88) of primary school participants indicating that they “watch and listen” compared with 58.8% (n=60/103) of secondary school participants.

Figure 3: What Participants do when Adverts are Shown on Television.

Television Advertisements
The results from the assessment of television advertisements are shown in Table 1. Overall 123/663 (18.5%) of advertisements on both television channels were for food and beverage items. Of these, 98 (79.7%) were for ‘junk food’ products. A number of ‘junk food’ products advertised could easily be misinterpreted as ‘healthy’ products due to misleading messages in the adverts. Examples include products, such as Powerade (promoted in association with becoming good at sport), a brand of Chicken Sausages and Corned Beef were both promoted as part of a ‘healthy’ family meal and Milo was promoted as being “nutritious”. According to the Nutrient Profiling Calculator18 none of these products could claim to be ‘healthy’.

Table 1: Profile of advertisements shown on Fiji 1 and Mai TV

Fiji 1

<table>
<thead>
<tr>
<th>Time</th>
<th>weekday 1</th>
<th>weekday 2</th>
<th>Saturday</th>
<th>Sunday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total adverts</td>
<td>91</td>
<td>81</td>
<td>139</td>
<td>88</td>
</tr>
<tr>
<td>Food and beverage adverts</td>
<td>25</td>
<td>22</td>
<td>24</td>
<td>13</td>
</tr>
<tr>
<td>‘Junk food’ adverts</td>
<td>23</td>
<td>18</td>
<td>22</td>
<td>11</td>
</tr>
</tbody>
</table>

Mai TV

<table>
<thead>
<tr>
<th>Time</th>
<th>weekday 1</th>
<th>weekday 2</th>
<th>Saturday</th>
<th>Sunday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total adverts</td>
<td>60</td>
<td>63</td>
<td>66</td>
<td>75</td>
</tr>
<tr>
<td>Food and beverage adverts</td>
<td>12</td>
<td>10</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>‘Junk food’ adverts</td>
<td>7</td>
<td>9</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

Street Advertisements
The results of the assessment of street advertising in the three targeted areas are provided in Table 2. Extensive levels of advertising for ‘junk’ foods were found in all three investigated areas. The most common form of street advertisements were posters outside shops and in shop windows. A total of 182 street advertisements for ‘junk food’ products were found in the three locations investigated.

Table 2: Assessment of ‘Junk Food’ Street Advertisements.

<table>
<thead>
<tr>
<th>Street Advertisement</th>
<th>Fiji 1</th>
<th>Mai TV</th>
<th>Fiji 1</th>
<th>Mai TV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signs outside shops and on mobile</td>
<td>12</td>
<td>19</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td>Posters outside shops and in shop windows</td>
<td>33</td>
<td>47</td>
<td>33</td>
<td>47</td>
</tr>
<tr>
<td>Banners</td>
<td>5</td>
<td>6</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Other Sponsored</td>
<td>6</td>
<td>5</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>55</td>
<td>50</td>
<td>55</td>
</tr>
</tbody>
</table>

Sponsored Events
From the web search for references to sponsored events, a total of 14 events sponsored by ‘junk food’ products were found to have taken place in the designated one year. The majority of these events targeted children, families or schools.

Awareness:
Participants were asked to name three food products and three beverage products that they had seen advertised.
The majority of students from both schools were able to name three food products and three beverage products they had seen advertised. A higher proportion of secondary school participants (92%) were able to name six products compared with only 61% of primary school participants.

Most of the products (85%) named by participants fell into the ‘junk food’ classification category (78% of food products and 91% of beverage products named fell into this category).

Participants were asked to name a sports event that was sponsored by a food or beverage product. The majority of participants were aware of, and could name numerous sports events sponsored by food and beverage products. Eighty eight percent of primary school participants were able to name a sports event sponsored by a food or beverage product, a significantly lower proportion than the 97% of secondary school participants (p < .01).

Of the total sports events named by participants, 97% were linked to ‘junk food’ sponsorships.

**Impact:**
Participants were asked ‘Did seeing these adverts make you want to have some of these products?’ with response options ‘yes’, ‘no’ and ‘sometimes’. Primary school participants (98.8%) were found to be more likely to want to try products they had seen advertised than secondary school participants (90.2%) (p < .03).

Participants were also asked whether, after seeing advertisements had they ever asked someone to buy the advertised foods/drinks for them. They were asked to indicate ‘yes’ or ‘no’. The majority of participants (64.8% of primary school participants and 75.5% of secondary school participants) indicated that they had asked someone to buy products for them after seeing the product advertised.

Participants were also asked to name a ‘healthy’ food and ‘healthy’ beverage they had seen advertised. A significantly higher proportion of secondary school participants were able to correctly name a healthy food product than those from the primary school (p < .01). Only 24% of primary school participants were able to correctly name a healthy food product, whereas 45% of secondary school participants were able to name a healthy food product. Approximately 9% of participants incorrectly identified a ‘junk food’ product as healthy.

For example, when participants were asked to name a healthy food product they had seen advertised, chicken sausages made up 5 of the 16 incorrect (unhealthy) responses.

Only 28.4% of primary school participants and 37.3% of secondary school participants could correctly name a healthy beverage product. Approximately half of the students at both schools incorrectly named a beverage they thought was healthy. Fifty one percent of primary school participants answered this question incorrectly, secondary school participants displayed similar knowledge with 48% answering this question incorrectly. An example of this can be seen in the advertising of Powerade, which was commonly associated with increasing sports performance; when participants were asked to name a “healthy” beverage they had seen advertised 18% named Powerade.

**Discussion:**
Overall, results show that children frequently watch television and had high recall of advertised food and beverage products; however most were unable to distinguish between products considered to be healthy and unhealthy, and participants requested their parents to purchase products they had seen advertised.

Television was found to be an important medium for advertising of ‘junk foods’. Consistent with previous findings in urban areas in Fiji, all participants were found to have access to a television to watch, with a large majority reporting that they watched television every day.

This finding is likely to be relevant to urban areas only, with consistent access to television probably lower in other areas of Fiji. This research also covered only the two free terrestrial channels, and did not include the two satellite television providers. These satellite stations often broadcast channels that originate in Asia and Australia along with international advertisements; in addition to local products, children are therefore exposed to advertisements from other countries.

Television viewing overall was high, with average viewing per week was 17.4 hours (95% CI 15.6, 19.2), more during the weekend than on weekdays. This is consistent with studies undertaken in New Zealand and Australia. (p.32)
The majority of participants in this research reported paying attention to advertisements, particularly primary school children, consistent with previous research which showed that older children pay less attention to advertisements and are more able to differentiate between advertisements and television programmes. Almost four out of five food advertisements reviewed were for ‘junk foods’, showing that children are presented with significantly fewer healthy than unhealthy food and beverage products. It is therefore not surprising that the vast majority of products named by participants also fell into the ‘junk food’ category. However, not only are the majority of food products that children see advertised ‘junk food’, but some advertisements appeared to give misleading messages. Numerous products were presented as healthy choices, however according to the profiling system they were identified as ‘junk food’. Examples can be seen in the television adverts for a local brand of chicken sausages which are promoted as being “healthy, nutritious and delicious”. However this product was found to be very high in sodium (905mg per 100g) fell into the ‘junk food’ category, and was commonly named by children as ‘healthy’.

Street advertisements were found to be abundant around Suva. It is reasonable to assume that many of the students would be walking within the investigated 805 metre radius to get to or from school, and therefore exposed frequently to the adverts. The results were comparable to an Australian study of 40 primary schools where an average of 45.8 “non-core” food advertisements were found within a 500 metre radius of each school. Outdoor food advertisements, including billboards, signs and posters are viewed as a relatively inexpensive method of advertising with potentially very high impact. People tend to view the same street advertisements regularly; therefore repeated brand exposure is achieved.

A number of high-profile events were identified that had been sponsored by ‘junk food’ products. During these events, the sponsoring product was displayed on numerous signs with products often distributed for promotional purposes designed to encourage children and adolescents to try unhealthy foods. Sponsorship of sports events can portray contradictory messages about what constitutes a healthy lifestyle.

Children and adolescents come to associate the sponsoring product with sports and physical activity and come to believe it is healthy and many were unaware of the junk food status of many products commonly seen at sponsored events.

The responses from participants regarding the effect that advertising had on their purchasing preferences was concerning, with almost all indicated that seeing advertisements has made them want to try the advertised product. Advertising seemed to be more effective on the younger participants; this is consistent with previous research that finds younger children to be more vulnerable to advertisements.

The role of so-called ‘pester power’ is of concern, as almost three quarters of participants had also attempted to influence others to buy advertised products for them. Evidence suggests that older children feel that they have more power to influence other people’s purchases and are therefore more likely to attempt this.

Participant’s exposure to ‘junk food’ advertising and promotion is high. The prevalence and effect of ‘junk food’ advertising in Suva is consistent with studies undertaken in Australia, New Zealand and internationally. This indicates that there is a wide spread need to tighten legislation on advertising ‘junk food’ products to children, particularly given cross-border advertising and media.

While this research provides valuable information about the problem of ‘junk food’ advertising and sponsorship in Fiji, the findings are of relevance in the region, and the approach could easily be replicated in other Pacific Island countries. The Fijian government now has legislation for the restriction of junk food advertising in draft form. Cabinet endorsed the drafting of the legislation for the Marketing Code for Controls of Unhealthy Foods and Non-Alcoholic Beverages Advertising to Children on 15 August 2011. The Fiji National Food and Nutrition Centre, in collaboration with C-POND, is working on a Nutrient Profiling system that the Ministry of Health will use to classify foods as ‘healthy’ or ‘unhealthy’. Once drafted, the Marketing Code will be taken back to Cabinet for its approval and are likely to be a stimulus for action elsewhere in the region.

It should be noted that this research has several limitations that future research can address.
As data were collected from participants through a self administered questionnaire, participants were required to be able to understand the questions without assistance which meant the younger primary level children were excluded. A larger sample size and appropriate method suitable for younger pupils would be beneficial for future research. Additionally, the assessment of advertisements was limited in that data were not collected from all sources of advertising and promotion. Radio advertisements, competitions and the internet were not included.

Different factors impact the diets of children and adolescents in rural communities and other urban areas. In the future, a comparative study could be undertaken assessing the nutritional knowledge and product recall ability between children in Fiji with access to television plus other forms of media and those who do not have such access.

**CONCLUSIONS AND RECOMMENDATIONS:**

This research provides strong evidence that children and adolescents in Fiji are exposed to and affected by ‘junk food’ advertising. It was found that ‘junk food’ adverts and sponsorships were noticed by participants, influencing their food preference and perceptions of healthy and unhealthy foods. Further, these results indicate that the situation around ‘junk food’ advertisements and sponsorship in Fiji is similar to that found in many other countries globally, allowing conclusions from this research to be relevant internationally. It is surprising to note that levels of advertising in Fiji were similar to more developed and affluent neighbouring countries, demonstrating the reach of media globally.

The study strongly supports the need for the Fijian Government to implement legislation to protect children and adolescents from ‘junk food’ advertising. While the exposure of children to advertising, outside Suva may be considerably less, legislation is best implemented nationally. It is recommended that this legislation be based on the ‘International Code on Marketing Food and Non-Alcoholic Beverages to Children,’ for which the WHO has developed a set of recommendations.  

As a result of legislation changes, it is expected that in the long-term, manufacturers in both Fiji and internationally will seek to develop and market healthier food products.

Monitoring of the impacts of the legislation would be important, and ongoing research into factors affecting children’s diets would also be valuable.

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**REFERENCES:**


DO at least 30 minutes of moderate INTENSITY ACTIVITY on 5 or more days each week.