AUDIT OF OUTDOOR FOOD ADVERTISING NEAR PERTH SCHOOLS: BUILDING A LOCAL EVIDENCE BASE FOR CHANGE

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Rapid Obesity Policy Translation Research Project

TELETHON KIDS INSTITUTE
Proudly supported by the people of Western Australia through Channel 7’s Telethon
Outdoor advertising

**Overall aim**
Generate robust evidence describing, benchmarking and quantifying the volume and nature of all outdoor food advertising within a 500m radius of Perth schools.

**INFORMAS protocol**
Methodology for monitoring outdoor advertising around schools enabling intra and inter-country comparisons.

**School selection**
64 schools (primary, secondary, K-12) across 16 Perth LGA's were selected using random sampling within population density (high/low) and SES (high/low) strata.
GIS NAVIGATION MAPS
Area within 500m radial buffer around school boundary scanned on foot by trained research staff for all outdoor ads (defined as stationary objects containing either a recognisable logo and/or an intended message)

Majority of data collection occurred July-Dec 2019

AUDITORS USED TABLETS
- Data entry/coding
- Photograph
- Geolocation of each ad on-site used to determine the distance from each ad to the school boundary via GIS
Advertisement coding - size

**Small**
≥A4 but <1.3m x 1.9m

**Medium**
>1.3m x 1.9m but
<2.0m x 2.5m

**Large**
>2.0m x 2.5m
Advertisement coding - type

- Billboard
- Poster/banner
- Free-standing
- Painted
- Digital/LED
- Merchandising
Advertisement coding – setting

- Food shop
- Non-food shop
- Road
- Building
- Bus shelter
- Train station
Advertisement coding – content

**Food**

INFORMAS/AGTHE aligned food categories:
- Core (healthy) foods recommended to meet daily nutritional req (n=11)
- Non-core (unhealthy) foods surplus to daily requirements (n=15)
- Miscellaneous foods (n=4)
- Branding only (companies/logos and brands, no products)

**Non-food**

Retail, entertainment and leisure, motor vehicles, finance, communications, travel/accommodation, media/TV/news, Government/Council
Advertisement coding – content

**Other info recorded:**
- Company/shop/business and/or brand
- Pictures and/or words
- Number of food products and INFORMAS/AGTHE sub-categories depicted in each ad
- Outdoor advertising company (if applicable, e.g., APN)

**Ineligibility criteria:**
- Real estate signs (e.g., for sale/open for inspection)
- Construction signage, fencing or screening
- On-premise signage imparting info only (e.g., name, contact details, logo, opening hours)
- Ads inside stores (except windows)
- Community safety or public information only
Our data collection team

Investigators, research staff & students

- Gina Trapp (Project Lead)
- Paula Hooper (GIS/Map support)
- Lukar Thornton (App support)
- Joelie Mandzufas (Project Co-ordinator)
- Wesley Billingham (Statistician)
- Emma Charlton (Research Assistant)
- Naomi Plummer (Research Assistant)
- Olivia Catchick (Research Assistant)
- Michaela Johnston (Research Assistant)
- Amy Sievers (Practicum student)
- Monica McDonald (Practicum student)
- Nicole Wickens (Practicum student)
- Benedetta Giuntini (Practicum student)
- Smriti Sikri (Practicum student)
- Harindra Vidyattilake (Practicum student)

Volunteers

- Nicole Davidson
- Lisa Anne Spalding
- Aida Noordin
- Campbell Peters
- Cassie Murphy
- Dylan Ferrier
- Emily Chan
- Kalyisah Farid
- Megan Baker
- Serena Louie
- Isabel Dunstan
- Holifiah Bahar
- Hayley Caratti
## Results: School sample

<table>
<thead>
<tr>
<th>SES</th>
<th>Population Density</th>
<th>Primary School</th>
<th>Secondary School</th>
<th>K-12 school</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>High</td>
<td>9</td>
<td>4</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>High</td>
<td>Low</td>
<td>8</td>
<td>4</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td>Low</td>
<td>High</td>
<td>10</td>
<td>4</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>Low</td>
<td>Low</td>
<td>8</td>
<td>7</td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>35</strong></td>
<td><strong>19</strong></td>
<td><strong>10</strong></td>
<td><strong>64</strong></td>
</tr>
</tbody>
</table>
VOLUME & NATURE OF OUTDOOR ADVERTISING WITHIN 500M OF PERTH SCHOOLS
RESULTS FROM 64 SCHOOLS
(35 PRIMARY, 29 SECONDARY)

5636 ADVERTS IDENTIFIED

(n=1708) 30% FOOD ADVERTS

(n=3928) 70% NON-FOOD ADVERTS

OF THE 1708 FOOD ADVERTS:

74% n=1271 were for unhealthy foods

1 in 3 were for alcohol

8% n=144 were for healthy foods

11% n=189 featured branding information only

6% n=104 were for miscellaneous foods
There were 9x as many ads for unhealthy foods than healthy foods.
Results: most frequently advertised food products

- Alcohol: 25%
- Fast food (burgers/chips/pizza/kebabs): 14%
- Sugar-sweetened beverages: 13%
## Results: Frequency of advertised food products

<table>
<thead>
<tr>
<th>UNHEALTHY (NON-CORE) FOOD CATEGORIES</th>
<th>Number of food ads</th>
<th>% of total food ads</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Alcoholic beverages</td>
<td>403</td>
<td>24%</td>
</tr>
<tr>
<td>2. Fast food meals (e.g., burgers, chips, pizza, fish and chips, kebabs)</td>
<td>242</td>
<td>14%</td>
</tr>
<tr>
<td>3. Sugar sweetened drinks (e.g., soft drinks, energy drinks, flavoured &amp; electrolyte drinks)</td>
<td>215</td>
<td>13%</td>
</tr>
<tr>
<td>4. High fat/salt meals (e.g., fried foods, curry)</td>
<td>178</td>
<td>10%</td>
</tr>
<tr>
<td>5. Ice-cream and iced confection</td>
<td>123</td>
<td>7%</td>
</tr>
<tr>
<td>6. Sweet breads, cakes, muffins, biscuits, pastries</td>
<td>69</td>
<td>4%</td>
</tr>
<tr>
<td>7. Full cream milks/yoghurts (&gt;3g/100g fat), cheese (&gt;15g/100g fat) and their alternatives</td>
<td>61</td>
<td>4%</td>
</tr>
<tr>
<td>8. Flavoured noodles/ fried rice products</td>
<td>38</td>
<td>2%</td>
</tr>
<tr>
<td>9. Savoury snack food with added salt/fat including chips (crisps), coated nuts</td>
<td>27</td>
<td>2%</td>
</tr>
<tr>
<td>10. Chocolate and candy</td>
<td>27</td>
<td>2%</td>
</tr>
<tr>
<td>11. Meat and meat alternatives processed or high in salt (e.g., frankfurts, tinned meats)</td>
<td>20</td>
<td>1%</td>
</tr>
<tr>
<td>12. Other high fat/salt products (e.g., butter, animal fats, high fat savoury sauces)</td>
<td>20</td>
<td>1%</td>
</tr>
<tr>
<td>13. Sweet snack foods (e.g., jelly, sugar coated fruits/nuts, tinned fruit in syrup)</td>
<td>14</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>14. High sugar/low fibre breakfast cereals</td>
<td>4</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>15. Fruit juices less than 98% fruit</td>
<td>3</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>
### Results: Frequency of advertised food products

<table>
<thead>
<tr>
<th>HEALTHY (CORE) FOOD CATEGORIES</th>
<th>Number of food ads</th>
<th>% of total food ads</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Low fat meals (e.g., soups, sandwiches, salads, sushi)</td>
<td>104</td>
<td>6%</td>
</tr>
<tr>
<td>2 Meat and meat alternatives, nuts and seeds</td>
<td>55</td>
<td>3%</td>
</tr>
<tr>
<td>3 Fruits and fruit juice &gt;98% fruit</td>
<td>48</td>
<td>3%</td>
</tr>
<tr>
<td>4 Vegetables</td>
<td>45</td>
<td>3%</td>
</tr>
<tr>
<td>5 Breads, rice and rice products (nothing fried)</td>
<td>41</td>
<td>2%</td>
</tr>
<tr>
<td>6 Bottled water (unflavoured mineral/sodas)</td>
<td>10</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>7 Healthy snacks – based on core foods (fruit/veg, grain, dairy, meat, meat alternatives)</td>
<td>5</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>8 Low in sugar and high in fibre cereals (&lt;20g sugar, &gt;5g of dietary fibre per 100g)</td>
<td>3</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>9 Milk, yoghurt, cheese, probiotic drinks</td>
<td>2</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>10 Mono/ polyunsaturated fats e.g. olive oils, plant-based margarines</td>
<td>2</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>11 Baby foods (not formula)</td>
<td>0</td>
<td>&lt;1%</td>
</tr>
</tbody>
</table>
## Results: Frequency of advertised food products

<table>
<thead>
<tr>
<th>MISCELLANEOUS</th>
<th>Number of food ads</th>
<th>% of total food ads</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tea and coffee</td>
<td>191</td>
<td>11%</td>
</tr>
<tr>
<td>2. Vitamin/mineral or other dietary supplements, sugar free gum</td>
<td>32</td>
<td>2%</td>
</tr>
<tr>
<td>3. Recipe additions including soup cubes, herbs, seasonings</td>
<td>11</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>4. Baby formula</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Results: Number of food sub-categories depicted in each food ad

- One: 1387
- Two: 181
- Three: 122
- Four+ and above: 18
Results: outdoor advertisements

Within 500m of the 64 schools

- 3 schools (0 ads of any kind)
  - 75% of schools had ≥1 food ad
    - Average=36 ads, range 3-190
  - 70% of schools had ≥1 unhealthy food ad
    - Average=28 ads, range 1-136
  - 55% of schools had ≥1 alcohol ad
    - Average=10 ads, range 1-62
  - 37% of schools had ≥1 healthy food ad
    - Average=6 ads, range 1-19
Results: Total number of ads within 500m of schools by SES

Compared with schools located in HIGH SES areas:

Schools located in LOW SES areas had a significantly higher ratio of unhealthy (non-core) food ads to healthy ads.
Results: Proportion of ads by SES and distance

Schools located in LOW SES areas had a significantly higher proportion of:
- total food ads within 250m (vs 250-500m)
Results: Proportion of ads by SES and distance

Schools located in LOW SES areas had a significantly higher proportion of:
- unhealthy food ads (excl alcohol) within 250m (vs 250-500m)
Results: Proportion of ads by SES and distance

Schools located in LOW SES areas had a significantly higher proportion of:
- **alcohol ads** within 250m (vs 250-500m)

![Chart showing comparison between High SES and Low SES areas for proportion of alcohol ads within 250m and 250-500m distances. The chart indicates that the proportion is higher in Low SES areas.](chart)
Results: Total number of ads within 500m by population density

- More non-food and food ads in high population dense areas
- Proportion of food ads to non-food ads higher in low population-dense areas
- Content of food ad (healthy, unhealthy, branding, misc) was not significantly different between high/low population dense areas
Results: Average number of ads within 500m by school type

- **K-12**: Non-Food ad 81, Food Ad 41
- **Primary**: Non-Food ad 57, Food Ad 25
- **Secondary**: Non-Food ad 58, Food Ad 22
Results: Proportion of ads by school type and distance

K-12 schools had a significantly higher proportion of:
- **total food ads** within 250m (vs 250-500m)

<table>
<thead>
<tr>
<th>School Type</th>
<th>Proportion of Total Food Ads</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-12</td>
<td>50%</td>
</tr>
<tr>
<td>Primary</td>
<td>33%</td>
</tr>
<tr>
<td>Secondary</td>
<td>30%</td>
</tr>
</tbody>
</table>
Results: Proportion of ads by school type and distance

K-12 schools had a significantly higher proportion of:
- **healthy (core) food ads** within 250m (vs 250-500m)

![Proportion of healthy (core) food ads](chart)

- K-12: 60%
- Primary: 31%
- Secondary: 35%
Results: Proportion of ads by school type and distance

K-12 schools had a significantly proportion of:
- **alcohol ads** within 250m (vs 250-500m)

![Bar chart showing proportion of total food ads by school type and distance](chart.png)
Results: Average count of ads within 500m by presence of shopping area

<table>
<thead>
<tr>
<th>Shopping area present</th>
<th>Non-Food ad</th>
<th>Food Ad</th>
</tr>
</thead>
<tbody>
<tr>
<td>82</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>
Results: Average number of food ads by ad content and distance
Results: Count of outdoor food ads within 500m by ad type

This pattern of results was consistent across all school types, SES and population density.
Results: Size of outdoor food ads within 500m of all schools

- **Small outdoor food ads**
  - 75% unhealthy (non-core)
  - Most frequent = alcohol (25%)

- **Medium outdoor food ads**
  - 70% unhealthy (non-core)
  - Most frequent = alcohol (19%)

- **Large outdoor food ads**
  - 66% unhealthy (non-core)
  - Most frequent = alcohol (34%)
Results: Count of total food ads within 500m by setting

- Food shop: 954
- Non-food shop/business: 196
- Road: 508
- Train station: 0
- Building: 6
- Bus shelter: 44
Results: bus shelter food ads

- Alcohol: 27%
- Unhealthy (non-core): 60%
- Healthy (core): 4%
- Branding: 7%
- Misc: 2%
Results: bus shelter food ads

- Alcohol: 27%
- Unhealthy (non-core): 60%
- Healthy (core): 4%
- Branding: 7%
- Misc: 2%
Results: bus shelter food ads

- Alcohol: 27%
- Unhealthy (non-core): 60%
- Branding (core): 4%
- Misc: 2%
KEY FINDINGS

74% of outdoor food advertising within 500m of Perth schools was for unhealthy food.

Alcohol was the most frequently advertised food product, followed by fast food and sugar sweetened beverages.

9x as many ads for unhealthy foods than healthy foods.

Low SES areas had a higher proportion of total food ads, unhealthy food ads and alcohol ads (but not healthy ads) within 250m of schools.
KEY FINDINGS

Primary schools had an average of 25 outdoor food advertisements (range=0-190)

Secondary schools had an average of 22 outdoor food advertisements (range=0-94)

K-12 schools had an average of 41 outdoor food ads (range=0-116) and a significantly higher proportion of total food ads, healthy and alcohol ads within 250m

87% of food ads on bus shelters were for unhealthy (non-core) foods including alcohol

The majority of food ads were located at a Food shop or road
Implications for policy & practice

We need a comprehensive mix of strategies to reduce unhealthy food advertising near schools

- **Revise national advertising industry codes**
  To impose restrictions on the density/type/content of advertisements that surround schools

- **Changes to the Dept. of Planning’s guidelines for advertising on transport corridors**
  To impose restrictions on unhealthy food/alcohol advertisements

- **Create healthy food zones near schools**
  Changes to land use and zoning policies to restrict unhealthy food/alcohol outlets near schools

- **Changes to Local Government Local Planning Policies**
  To contain provisions relating to the guidance or regulation of food/alcohol advertising

- **Remove unhealthy food & alcohol advertising from all state-based assets**
  Including billboards, digital/LED signs and bus shelters, which contain a high proportion of unhealthy food ads including alcohol
THANK YOU

For more information

gina.trapp@telethonkids.org.au