The school food environment – are we making the healthy choice the easy choice?

Dr Colette Kelly

Health Promotion Research Centre,
National University of Ireland, Galway
Determinants of obesity

- Up to 25% of primary school children overweight and 19% teenagers (IUNA, 2005, 2008, 2012; Layte & McCrory, 2009; Heinen et al., 2014)

- Children’s weight related to social class – even at age 3yrs (Williams et al., 2013)


- Obesity is strongly determined by individual, social, cultural and economic factors and the physical/built environment
  - Availability, proximity, choice

  (Morland et al 2002; Layte et al., 2011; Day et al 2011; Timperio et al 2008)
Health Promotion

• To enable people to increase control over and improve their health

• Address determinants of health and health inequalities
  
  – Create an environment so that the default option is the easy choice

  – Schools are one setting through which action can be taken to enable healthy choices
Evidence base

- Surge in literature since 2011 on school retail food environments
- Mostly cross-sectional studies & most focused in N. America
- Area level indicators are most common
- GIS preferred method to assess exposure
- Outcomes: Body weight, diet, purchases
- Evidence is equivocal with some evidence for effect on body weight (Williams et al 2014).
School food environment

• External school food environment
  – The built environment on food choice/obesity
  – Planning regulations (Nov 2011, April 2014….)

• Internal school food environment
  – Health Promoting Schools
  – Vending machines (April 2015)
Aim

- To characterise the food environment in post-primary schools

  - Focus on schools involved in the 2010 HBSC survey in Ireland (n=63)
Mapping Food Environment

- Geographic information system (GIS)
- Geo-coded HBSC post-primary schools
  - GeoDirectory
- 1km circular buffers
- Food businesses were mapped – Fast food outlets, local shops, restaurants...
- Data validation: Google Street View & reliability checks
School characteristics

- Urban 61.9%
- Rural 38.1%
- DEIS 20.6%
- Non DEIS 79.4%
- Girls 17.5%
- Boys 22.2%
- Mixed 60.3%
## External food environment – 1km

<table>
<thead>
<tr>
<th>Mean values of food retail businesses within 1km of Irish schools (n=63)</th>
<th>Urban/rural status</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Coffee shops and sandwich bars</td>
<td>3.89</td>
</tr>
<tr>
<td>Restaurants</td>
<td>3.65</td>
</tr>
<tr>
<td>Asian and other ‘ethnic’ Restaurants</td>
<td>2.60</td>
</tr>
<tr>
<td>Fast Food outlets</td>
<td>4.03</td>
</tr>
<tr>
<td>Supermarkets</td>
<td>1.95</td>
</tr>
<tr>
<td>Local Shops</td>
<td>6.71</td>
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<tr>
<td>Fruit and Vegetable shops</td>
<td>0.73</td>
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</tbody>
</table>
### Mean values of food retail businesses within 1km of Irish schools (n=63)

<table>
<thead>
<tr>
<th></th>
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Young People’s perceived school food environments

- Qualitative study to explore young people's perception of their school food environment

- 6 post-primary schools recruited
  - 2 classes per school (1 younger/1 older, aged 12 -18)

- 95 students involved (37% Boys, 63% Girls)

- One class period ~40 mins
  - Mapping exercise
  - Group discussion with topic guide
Perceived food environment

- The number/quantity of food outlets close to their school
- What food environments they use
- Quality of food outlets within walking distance
- Barriers to accessing food outlets of their choice
- Food purchases
- A need for change or maintain status quo?

- Topics discussed: Price, time, taste, no brand loyalty, social aspect, access at various times, use of various outlets – petrol stations, pubs, discount stores, Chinese restaurants etc.
Summary

• No published study has explored objective and perceived exposure to food outlets

• Food retailers cluster around schools
  – 75% of post-primary schools had 1+ fast food restaurants within 1 km
  – 29.7% had 5+ fast food outlets within 1 km of schools

• Boys schools & urban schools – greater proportion of food businesses

• These food outlets provide ample food purchasing opportunities

• Qualitative work to provide greater understanding of youth & school food environments
Open discussion...

• Variety of food retail outlets surrounding schools
  – Are these supportive environments for young people?
  – Are planning regulations the way forward?
  – Are school lunch policies required?
  – Are interventions necessary? e.g. partner with store owners/local shops – price promotions, availability of healthy snacks, beverages, single-servings, product placement…..

• Enabling healthy choices is challenging
  – Community involvement
  – Internal school food environment
  – Engage youth
Future work

• Children’s journeys through food environment before, during and after school
  – Purchasing behaviour
  – When/where food eaten (outcome measure)
• Audit local stores & other food retailers
  – Categorising food retailers
• Combining qualitative and quantitative measures of food access
• Home/School environments
Questions?
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- Professor Oddrun Samdal, Data Bank Manager, University of Bergen
- All members of the international HBSC network

- HBSC Ireland team in particular Mary Callaghan
Contacts

HBSC Ireland Website:  www.nuigalway.ie/hbsc

HBSC International Website:  www.hbsc.org

Contact HBSC Ireland:  hbsc@nuigalway.ie

Contact Colette:  colette.kelly@nuigalway.ie
Thank you