THE FOODSCAPE OF POST-PRIMARY SCHOOLS IN IRELAND.

Callaghan, M., Molcho, M., Nic Gabhainn, S. & Kelly, C.

Presented by: Mary Callaghan
Health Promotion Research Centre
NUI Galway
Ireland

mary.callaghan@nuigalway.ie
www.nuigalway.ie/hbsc

BACKGROUND

▶ Increasing trend in overweight and obesity in children in Ireland -

20-25% primary school children

19% of teenagers   IUNA, 2005, 2008

▶ Nutritional habits of Irish adolescents not optimal

IUNA, 2005

▶ Social, physical and individual factors

Finegood et al., 2010, Butland et al., 2007

▶ Eating out of home

Mikkelsen et al, 2011

▶ School food environment

   ▶ Children - time in this setting

   ▶ External & Internal foodscape

STUDY AIM

- To examine food availability within and outside of schools
  - Geography, disadvantage, gender

  - To examine food available inside schools by questionnaire
  - To map food premises within 1km of post-primary schools that took part in the 2010 HBSC survey in Ireland
  - To characterise these food premises based on food sold

METHODS

▶ Identifier file – school name, address, gender, DEIS status

▶ Geocode schools

▶ Export food selling premises from GeoDirectory and categorise them based on food sold

▶ Create a spatially enabled dataset containing school food information and external food premises within a 1km circular buffer within ArcGIS

CHALLENGES

▶ Addresses

   ▶ Unique address format – no post code, house numbers not common outside of urban areas, Irish or English?

   Eg: Cregboy, Claregalway, Co. Galway

▶ GeoDirectory

   ▶ Commercial and domestic address database

▶ Manually geocode all schools

CHALLENGES

- Food premises categorisation
  - Internal and external
  - Where children are likely to eat?

- Classification process: Coffee shops and Sandwich bars, Full service restaurants, Asian and other ethnic restaurants, Fast food outlets, Supermarkets, Local shops and Fruit and vegetable retailers

- Businesses own website, online directories, Street View

CHALLENGES

- GIS data
  - Access
  - Licence
  - Cost
  - Expertise

- Circular buffers vs road network – 1km

- Geography
  - Urban rural status
  - OECD definition (modified)

SCHOOL CHARACTERISTICS

- Geography
  - Urban 61.9%
  - Rural 38.1%

- Gender
  - Girls 17.5%
  - Boys 22.2%
  - Mixed 60.3%

- Disadvantage
  - DEIS 20.6%
  - Non DEIS 79.4%

- School facilities
  - Canteen 69.5%
  - School shop 53.4%
  - Vending machine 37.7%

RESULTS – URBAN/RURAL - INTERNAL

Food availability within Irish schools % (n=63)				
		Urban/rural status		
	Yes	Rural	Urban	P value
Bottled water	89.3	95.5	85.3	0.230
Fruits	53.6	68.2	44.1	0.078
Vegetable/Salads	33.9	36.4	32.4	0.757
Sandwiches	71.4	72.7	70.6	0.863
Whole milk	48.2	54.5	44.1	0.446
Chocolate (or other flavoured) milk	25.0	9.1	35.3	0.027
Regular soft drinks, sports drinks, or fruit drinks (not 100% juice)	51.8	59.1	47.1	0.379
Diet soft drinks	28.6	36.4	23.5	0.299
Chocolate/sweets/biscuits/cake/crisps	60.7	50.0	67.6	0.187
Pizza	29.4	20.0	35.5	0.236
Chips (French fries)	33.3	30.0	35.5	0.685

RESULTS – GENDER - INTERNAL

Food availability within Irish schools % (n=63)				
	School gender			
	Girls	Boys	Mixed	P value
Bottled water	80.0	76.9	97.0	0.081
Fruits	70.0	30.8	57.6	0.134
Vegetable/Salads	60.0	23.1	30.3	0.142
Sandwiches	80.0	69.2	69.7	0.803
Whole milk	50.0	46.2	48.5	0.982
Chocolate (or other flavoured) milk	40.0	30.8	18.2	0.325
Regular soft drinks, sports drinks, or fruit drinks (not 100% juice)	60.0	61.5	45.5	0.523
Diet soft drinks	10.0	53.8	24.2	0.048
Chocolate/sweets/biscuits/cake/crisps	60.0	69.2	57.6	0.766
Pizza	50.0	46.2	14.3	0.032
Chips (French fries)	50.0	46.2	21.4	0.136

RESULTS – URBAN/RURAL – EXTERNAL

Mean values of food retail businesses within 1km of Irish schools (n=63)				
		Urban/rural status		
	Mean	Rural	Urban	P value
Coffee shops and sandwich bars	3.89	1.21	5.54	0.000
Restaurants	3.65	1.33	5.08	0.004
Asian and other 'ethnic' Restaurants	2.60	0.79	3.72	0.000
Fast Food outlets	4.03	1.08	5.85	0.000
Supermarkets	1.95	0.83	2.64	0.000
Local Shops	6.71	3.92	8.44	0.001
Fruit and Vegetable shops	0.73	0.13	1.10	0.000

RESULTS – GENDER – EXTERNAL

Mean values of food retail businesses within 1km of Irish schools (n=63)				
	School gender			
	Girls	**Boys**	**Mixed**	**P value**
Coffee shops and sandwich bars	4.82	6.07	2.82	0.028
Restaurants	3.73	7.86	2.08	0.001
Asian and other 'ethnic' Restaurants	4.00	3.86	1.74	0.025
Fast Food outlets	4.91	6.57	2.84	0.088
Supermarkets	3.09	2.43	1.45	0.000
Local Shops	8.09	10.21	5.03	0.003
Fruit and Vegetable shops	1.09	1.36	0.39	0.007

CONCLUSION

- Variety of healthy and unhealthy food in schools in Ireland
  - Resurgence of HPS Framework in Ireland (2011)
  - Guidance on vending machines

- Variety of food retail outlets surrounding schools
  - Supportive environments for young people?
  - Legislation the way forward?

- Enabling healthy choices is challenging

FUTURE WORK

▶ First time that geographic and school level data has been explored by HBSC Ireland

▶ On-going work – link the school level data to HBSC student level data

▶ Will inform future data collection at the school level by HBSC Ireland

ACKNOWLEDGEMENTS

Thank you

mary.callaghan@nuigalway.ie
www.nuigalway.ie/hbsc