



NUI Galway
OÉ Gaillimh



Internal and external school food environments and adolescent food behaviours

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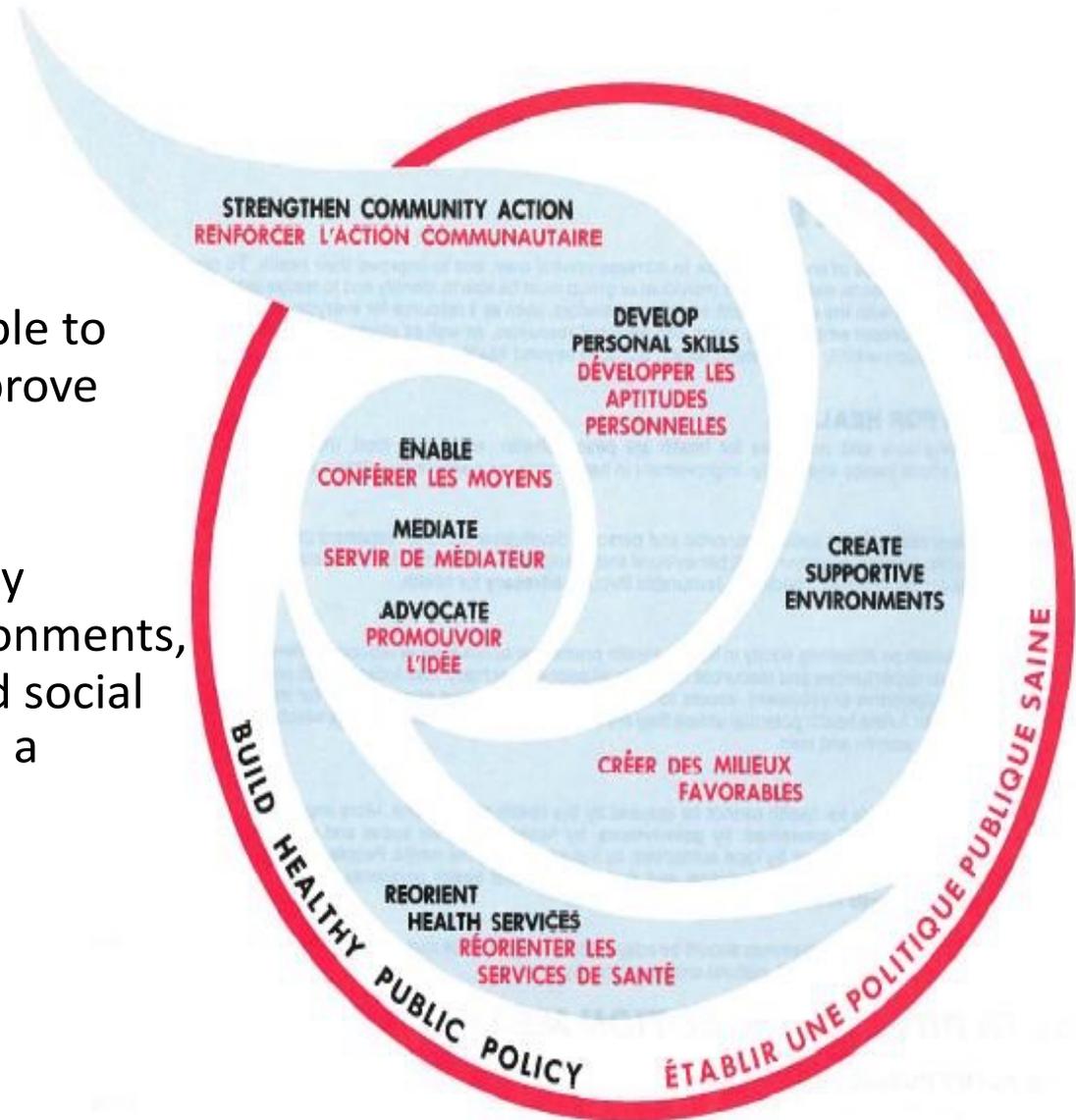
Geography and the commercial determinants of health, May 18th 2021, #CIG2021



HEALTH PROMOTION

...is the process of enabling people to increase control over and to improve their health” (WHO, 1986)

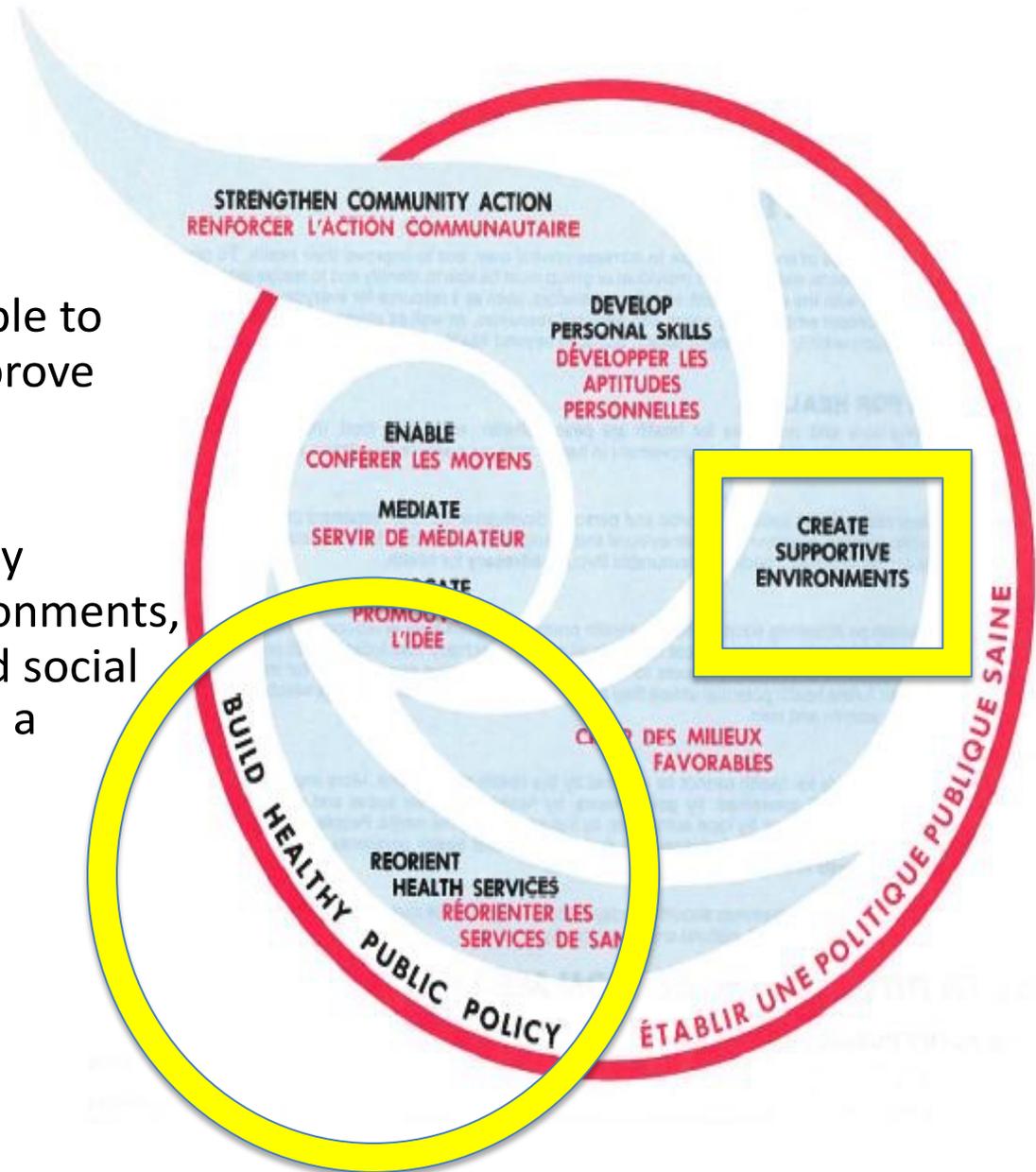
...represents a mediating strategy between people and their environments, synthesizing personal choice and social responsibility in health to create a healthier future (WHO, 1984)



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...is the process of enabling people to increase control over and to improve their health” (WHO, 1986)

...represents a mediating strategy between people and their environments, synthesizing personal choice and social responsibility in health to create a healthier future (WHO, 1984)



Food environments

- Food environments – collective physical, economic, policy and sociocultural surroundings, opportunities and conditions that influence food choice (INFORMAS)
- School food environments – important context to support and enable healthy food choices ¹
- Adolescents are not meeting dietary recommendations and youth overweight is of public health concern ²
- Internal and external school food environment



School food environments

1. To examine associations between fast food outlets surrounding post-primary schools and youth dietary habits

- Using cross-sectional Health Behaviour in School-aged Children (HBSC) Ireland survey data
- www.hbsc.org; www.nuigalway/hbsc



2. To explore adolescent's perception of local school food environment

- Qualitative multi-method study with post-primary school students

Methods

Study 1- HBSC Ireland (n=63 schools; 5344 students)

Student-level data

- Demographics,
- Daily fruit, veg, sweets, soft drinks
- Family food environment

School-level data

- School food availability
- Urban/rural status

GIS

- Geocoded PP schools
- 1km buffer
- Categorised food outlets

Study 2- Mapping N=6 schools; 96 students

Focus groups

- n=6 schools
- Mapping exercises
- Topic guide
- Photos

Multivariate logistic regression

Thematic analysis



Contents lists available at [ScienceDirect](#)

Appetite

journal homepage: www.elsevier.com/locate/appet



Food environments in and around post-primary schools in Ireland: Associations with youth dietary habits

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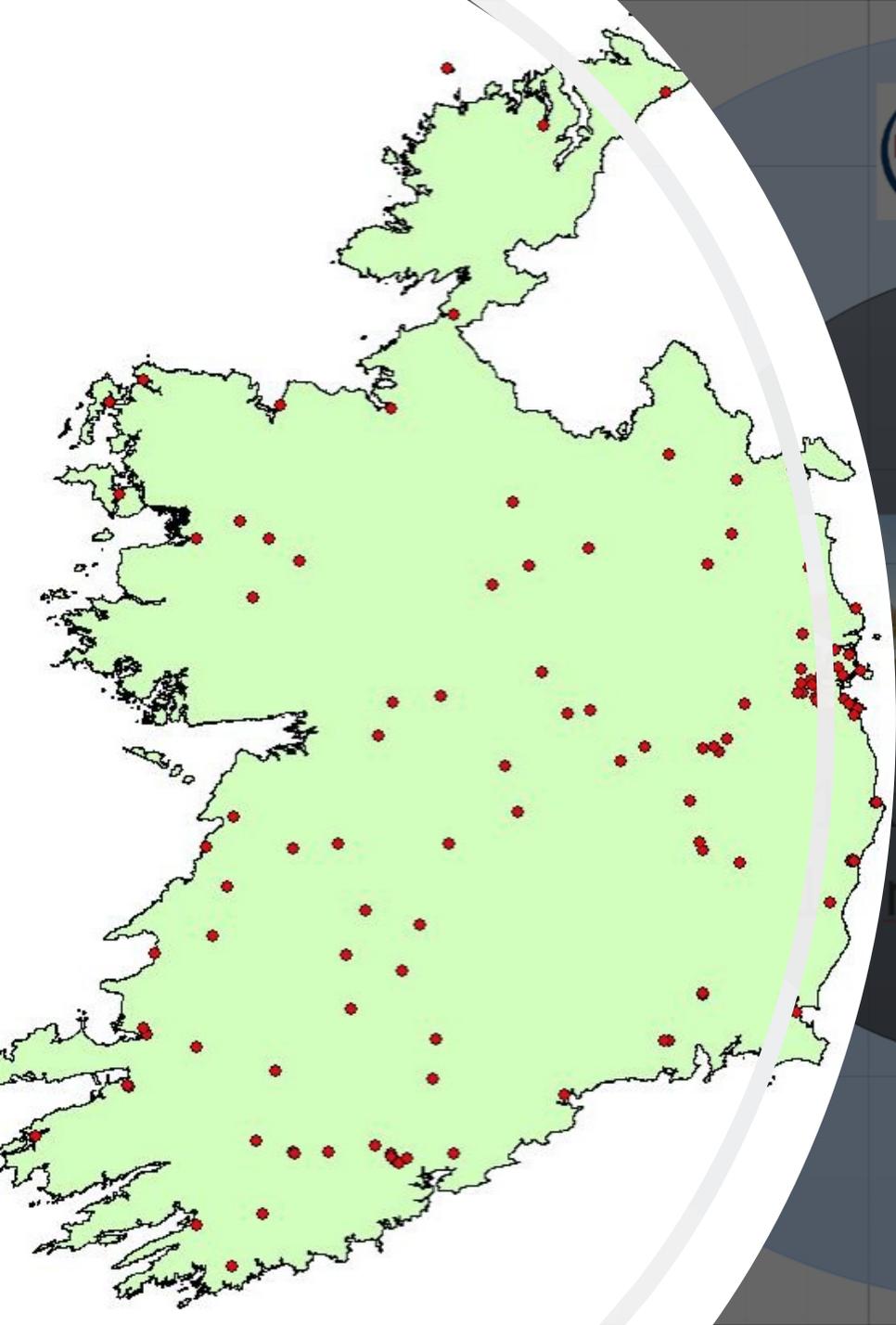
Food for thought: analysing the internal and external school food environment

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Post-primary schools

75% of schools had 1+
fast food outlet within
1km of schools

30% had 5+ fast food
outlets within 1km of
school

2 km

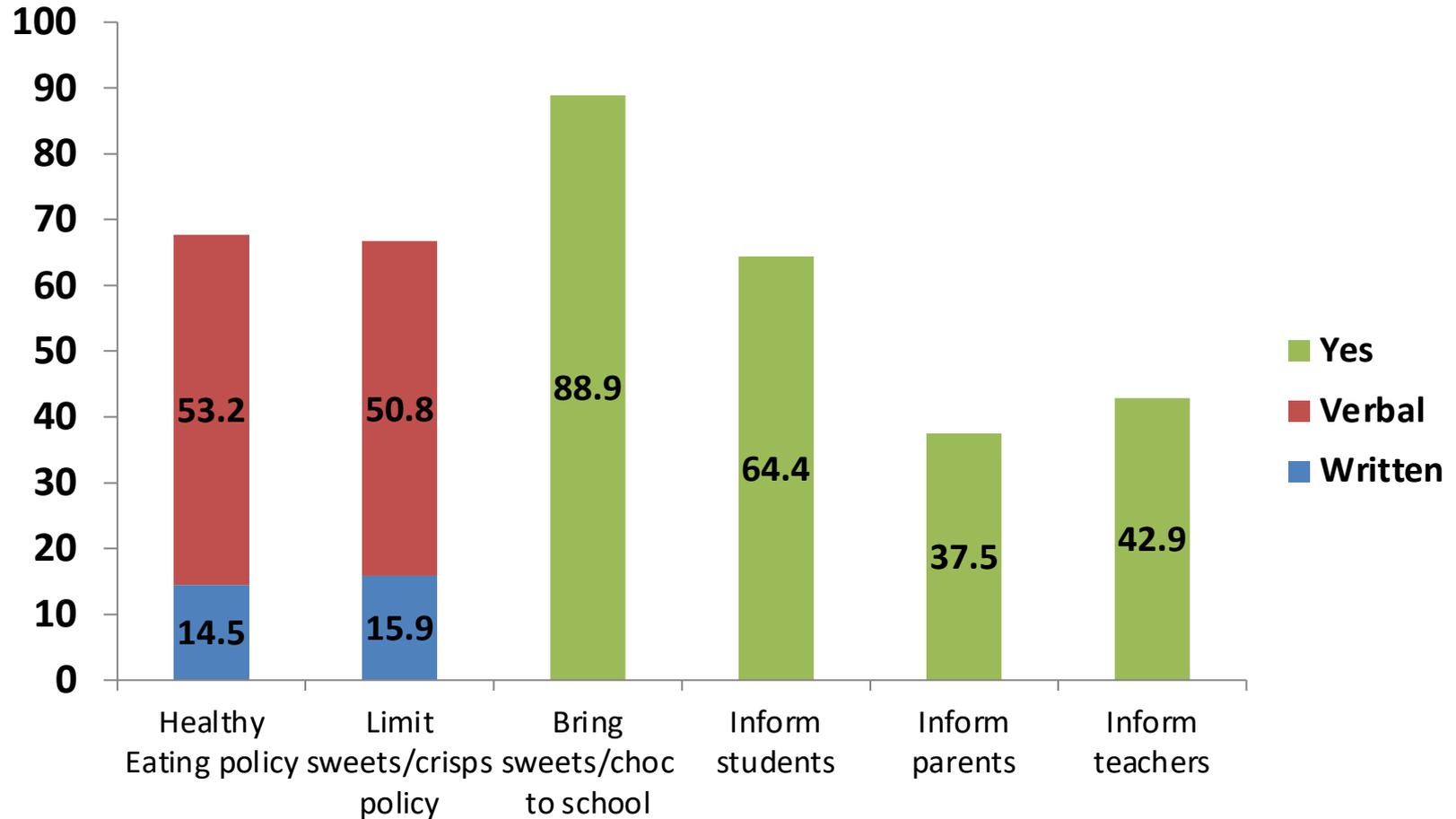
< 30 mins



1 km
mins

Internal school food environment

Food policies & communication to stakeholders (%)



Associations between fast food environments and diet

n=5,344

	Fruit daily	Vegetables daily
Adjusted Odds Ratios		
Food sold in school	0.87	1.05
Rural	0.92	1.04
>10% fast food within 1km	0.78*	0.79**
DEIS schools	0.79*	0.73**

*p<0.05; **p<0.01; ***p<0.001

Controlling for demographic, family food environment and school (DEIS, internal food availability)

Associations between fast food environments and diet

n=5,344

	Soft drinks daily	Sweets daily
	Adjusted Odds Ratios	
Food sold in school	0.99	0.91
Rural	0.76	0.86
>10% fast food within 1km	1.00	0.94
DEIS schools	1.79***	1.00

*p<0.05; **p<0.01; ***p<0.001

Controlling for demographic, family food environment and school (DEIS, internal food availability)



Article

'It's hard to make good choices and it costs more.': Adolescents' perception of the external school food environment.

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Mapping exercises with adolescents
(© OpenStreetMap)

Adolescent data– Food Outlets (AVAILABILITY)

Spar/Londis/
Centra/Costcut
ter

Lidl/ Aldi/
Dunnes

Topaz

Subway

Apache/
Papa Johns/
Dominos

Local
supermarkets

Supermacs/
Mc Donalds/
BK

Local fast
food
places

Supervalu

Local
Cafes



Sweet shops

Local pubs

Easons

Local
restaurants

Local hotels

Local
health
food shop

Adolescent data– FOODS PURCHASED

Health bars

Sesame sticks

Energy drinks –
Edge, Lucozade
sport

Coffee

7up/Coke/Mi
wadi

Pot
Noodles

Milk,
water

Biscuits,
buns

Croissant

Nuts,
popcorn

Yoghurt



Burgers,
pizza

Salads, fruit
salads

Chocolate,
donuts

Chicken curry,
lasagne

Wedges

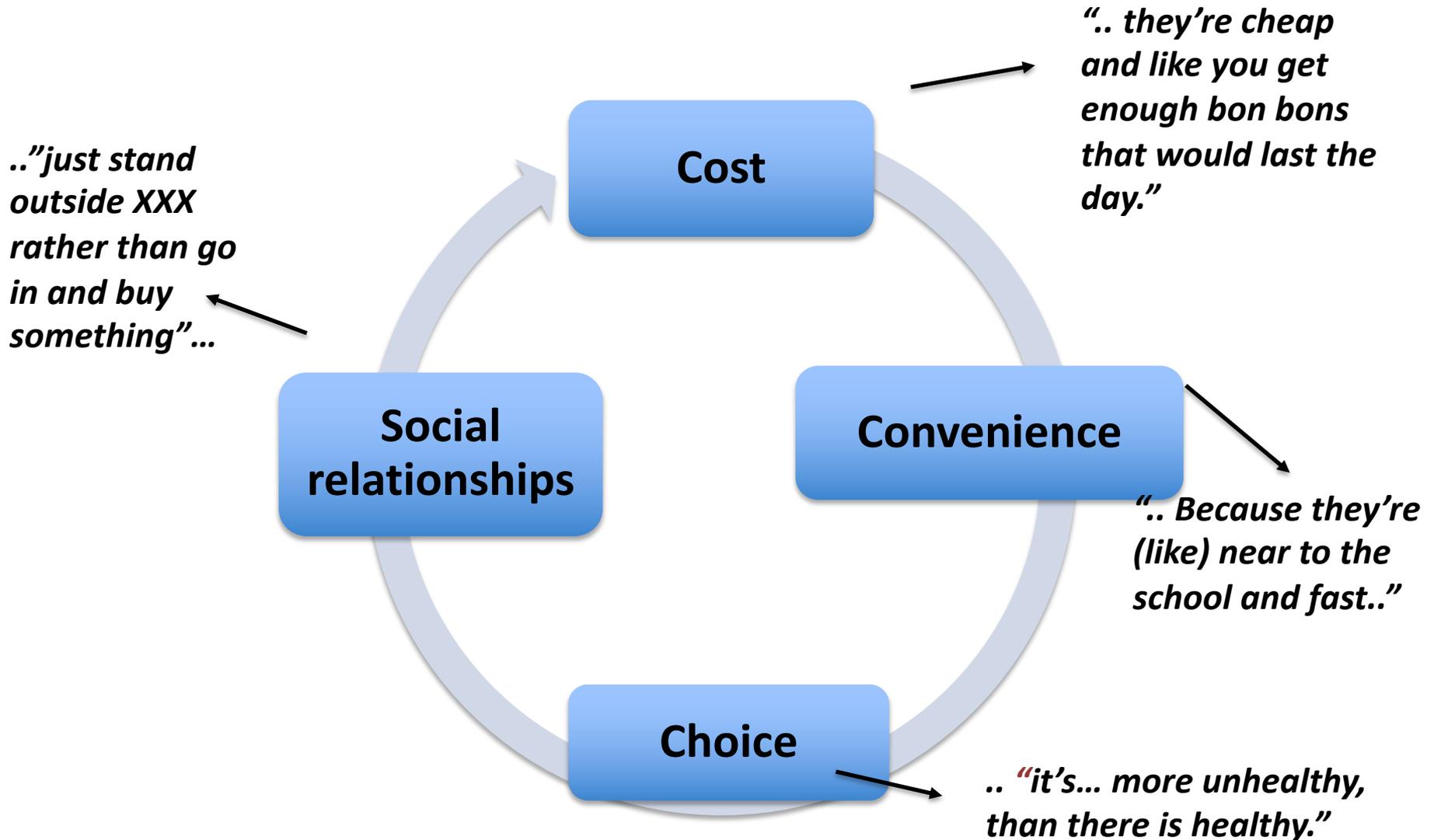
Sweets

Wraps, paninis,
soup

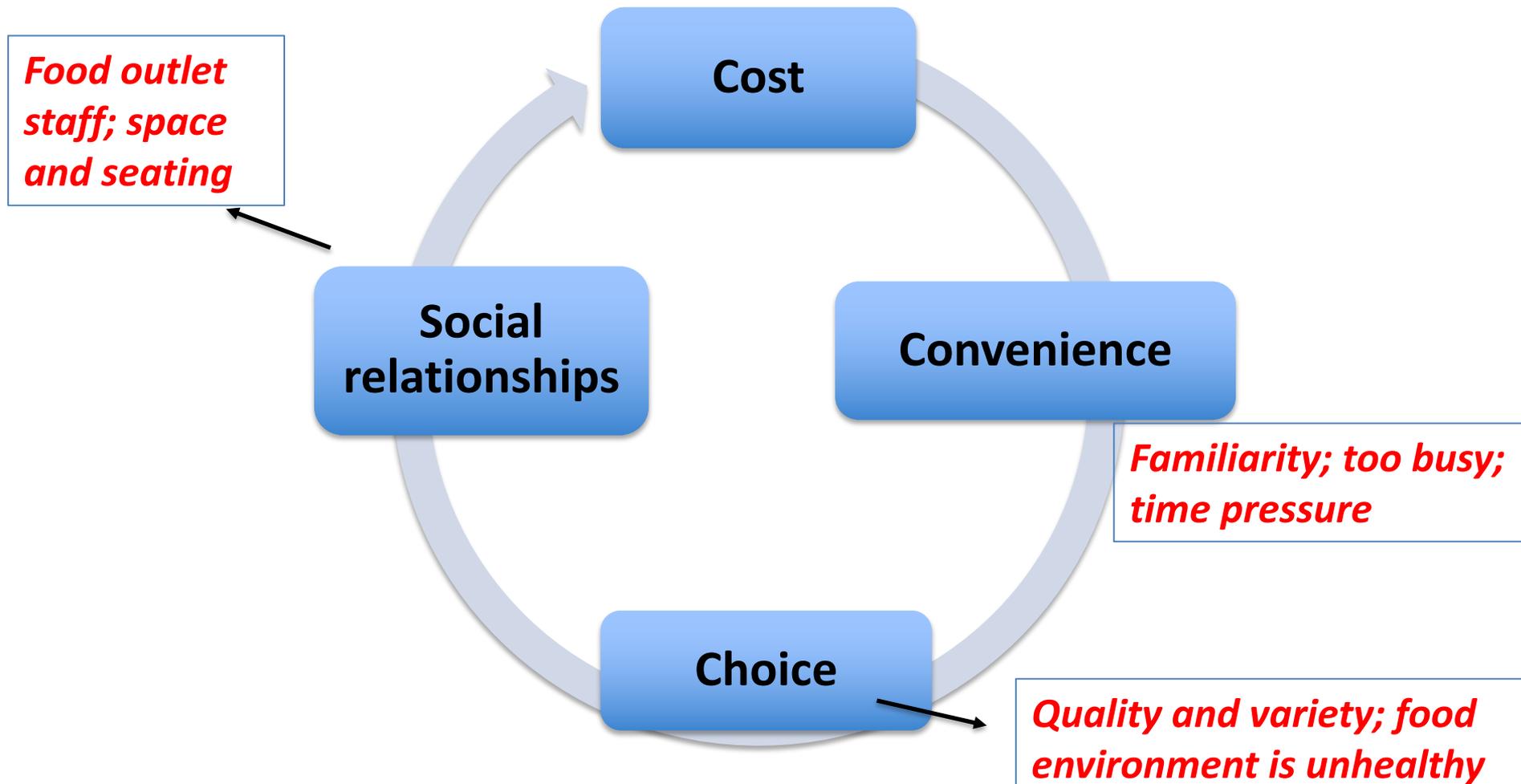
Sausage (rolls)
and chips

Hot chicken
fillet rolls

Findings – main themes



Findings - subthemes



Insights obtained

- Not loyal to brands/shops
- Price is an important intervention function
 - Getting value for money
 - Quality and variety
 - Healthy food costs more (deals)
- Architecture of food outlets and canteens
 - Physical space, social space



What's next?

- School food policies and practices - one piece of puzzle
- Planning regulations - “no-fry zones”
- Interventions - price, suggest swaps, and manipulate item availability
- Examining the commercial determinants on youth health
 - Contributing to nutritional inequalities?

Conclusion

- Food environment is a leading factor that drives eating behaviours
- The healthy choice is not the easy choice
- Time to align health with planning for the built/food environment rather than commercial interests





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Thank you
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