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INTRODUCTION

A healthy, balanced diet is important for health and well-being. Learning and practicing healthy eating habits at a young age can provide benefits throughout a lifetime. It can reduce the risk of heart disease, diabetes, osteoporosis and some cancers⁽¹⁾. Access to and availability of healthy, nutritious food is a major determinant of food choice. Access varies depending on location. The food environment around schools can influence young people's food choice and consequently affect their health and well being⁽²⁾.

AIM

The aim of this study was to investigate the distribution of well known fast food restaurant chains surrounding the post-primary schools which participated in the 2010 Health Behaviour in School-Aged children (HBSC) study in Ireland in relation to area level deprivation and school type using Geographic Information Systems (GIS).

METHODS

A Geographic Information System (GIS) is a powerful tool that allows users to capture, store, manipulate, analyze, manage, and present all types of geographic data. It integrates hardware, software and spatial data into a single system. Data was sourced from the 2010 HBSC survey. HBSC is a cross-sectional research study conducted in collaboration with the World Health Organization (WHO) Regional Office for Europe.

All post-primary schools (n=119) which took part in the 2010 HBSC survey were geocoded using the GeoDirectory⁽³⁾ (figure 1). GeoDirectory is a complete database of unique, verified addresses of all residential and commercial buildings in the Republic of Ireland together with a precise geocode. All well known fast food restaurant chains were mapped and displayed using ArcGIS 10. 1km and 2km circular buffers were created around participating post-primary schools identifying proximal access to fast food restaurant chains.

Schools designated as disadvantaged were identified and the small area health deprivation index (SAHRU)⁽⁴⁾ of the electoral district in which each school is situated was mapped.

RESULTS

Overall, 46.2% of post-primary schools had one or more fast food restaurants located within 1km and 56.3% within 2kms of the school. Access to fast food restaurant chains was found to be greater for urban schools. There was no difference between DEIS and non-DEIS schools. A positive correlation between deprivation and numbers of fast food chain restaurants was observed [1km: $r_s = 0.317$; $p = 0.000$; 2km: $r_s = 0.249$; $p < 0.006$], with more fast food restaurant chains located in areas which were described as more deprived.

ACKNOWLEDGEMENTS

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REFERENCES

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Figure 1: Locations of post primary-schools that took part in the 2010 HBSC survey

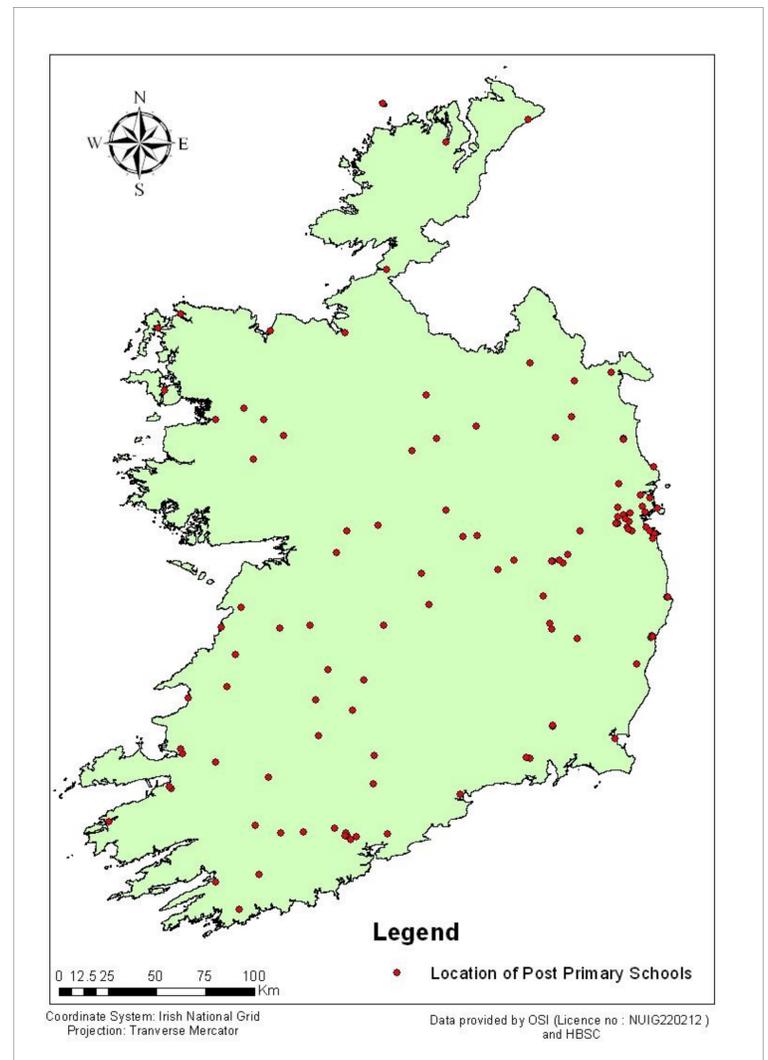


Figure 2: Numbers of fast food restaurant chains within 1 and 2 kms of the post-primary schools

Number of fast food chain restaurants	1 km circular buffer % (n)	2 km circular buffer % (n)
0	53.8 (64)	43.7 (52)
1	19.3 (23)	18.5 (22)
2	10.1 (12)	5.0 (6)
3	5.9 (7)	11.8 (14)
4	2.5 (3)	1.7 (2)
5	4.2 (5)	5.0 (6)
6	3.4 (4)	4.2 (5)
7+	0.8 (1)	10.1 (12)

CONCLUSION

The findings of this research have potential to inform policy on controlling the location of food businesses around schools. This study will be the first, to our knowledge, to look at the effects of the school environment on children's health and well-being in Ireland. Further research is needed to assess the relationship between the food environment around schools, student dietary habits and obesity risk.