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School food environments and children’s dietary behaviours: data from the Health Behaviour in School-aged Children (HBSC) survey

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School food environments are important determinants of children’s dietary habits⁽¹⁾. Interventions to increase availability of and access to healthy food in school environments are needed given the obesity crisis⁽²⁾. Proposals have included a ban on the location of fast food premises near schools⁽³⁾. Yet limited data exist on post-primary school food environments. Thus, using data from the 2010 Irish Health Behaviour in School-aged Children (HBSC) survey this study explored associations between fast food outlets in close proximity to schools and youth dietary habits.

HBSC is a school-based survey with data collected through self-completion questionnaires administered in the classroom⁽⁴⁾. Ethical approval was granted for the study and consent from schools, parents and children was obtained. Post-primary schools (n = 63) were mapped using ArcMap 10.2. Using GeoDirectory all food premises within a one kilometre radius of the schools were extracted and categorised into different types of food businesses based on type of food sold. Student data on food consumption were dichotomised into daily and less than daily. Associations between fast food environments and fruit, vegetable, soft drinks and sweets consumption were expressed in odds ratios from logistic regression models in Stata, version 12.0.

	Fruit daily n = 4,115	Vegetables daily n = 4,100	Soft drinks daily n = 3,924	Sweets daily n = 3,927
	<i>Adj OR</i>			
Internal availability of food	0.87	1.05	0.99	0.91
Food sold in school				
Not sold in school	Ref	Ref	Ref	Ref
Population density				
Rural	0.92	1.04	0.76	0.86
Urban	Ref	Ref	Ref	Ref
Food premises within 1 km				
>10 % fast food	0.78*	0.79**	1.00	0.94
≤10 % fast food	Ref	Ref	Ref	Ref
Disadvantaged school				
Yes	0.79*	0.73***	1.79***	1.00
No	Ref	Ref	Ref	Ref

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

Controlling for individual (age, gender, social class), family (food rules and mealtimes) and other school-level factors (disadvantaged status, availability of food in schools), students who attended schools where more than 10 % of the surrounding outlets were fast food establishments were less likely to have fruit (OR 0.78, 95 % CI 0.64–0.94) and vegetables (OR 0.79, 95 % CI 0.66–0.93) on a daily basis. For students at schools designated disadvantaged, the odds of having soft drinks (OR 1.79, 95 % CI 1.30–2.47) daily were larger and the odds of consuming fruits (OR 0.79, 95 % CI 0.62–0.99) or vegetables (OR 0.73, 95 % CI 0.60–0.88) daily were smaller than for students at schools that were not classified as disadvantaged. School food environments influence dietary habits and should be considered in efforts to improve dietary habits of children and to help influence obesity rates in Ireland.

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