

Associations between breakfast consumption, attitudes towards breakfast and physical activity in adolescents

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Regular breakfast consumption has been associated with children and adolescents having a lower body mass index⁽¹⁾, positive effects on cognitive performance⁽²⁾, a better overall diet quality and being more physically active⁽¹⁾. However, as children progress to adolescence they become more likely to skip breakfast⁽³⁾ and physical activity levels decline, particularly in girls⁽⁴⁾. Adolescence is a critical time point as habits and attitudes towards healthy behaviours developed at this age are likely to track into adulthood⁽⁵⁾. Health behaviours are suggested to cluster in individuals⁽⁶⁾, therefore identifying attitudes in adolescents that promote or create barriers to healthful behaviour presents an opportunity to investigate the potential determinants of breakfast behaviours.

The aim of the present study was to examine associations between the frequency of breakfast consumption, attitudes towards breakfast and physical activity levels in adolescents.

Fifty-six schools in Oxfordshire were invited to complete a questionnaire investigating the dietary habits and physical activity patterns of students aged 13 to 17 years. While this is an ongoing study, responses to date were assessed for: self-reported physical activity (PA) levels (PA questionnaire for adolescents; PAQ-A⁽⁷⁾), agreement of statements measuring attitude towards breakfast based on a previously validated attitude scale⁽⁸⁾ and breakfast frequency.

140 participants ($n = 109$ females, $n = 23$ male, $n = 8$ undisclosed) reported breakfast frequency as everyday (47%), 5–6 days (10%), 3–4 days (13%), 1–2 days (17%) and never (13%). Mean attitude scores (range 1 (negative) to 5 (positive)) and standard deviations (SD) were calculated for each attitude measure and compared by breakfast frequency.

Breakfast frequency	n	Attitudes towards breakfast							
		Usually snack at morning break		Rather snack than have breakfast		Usually eat a healthy breakfast		Feel ok without breakfast	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
never	18	2.5	1.33	2.5	1.42	2.5	1.32	2.0	1.06
1–2 days	23	2.1	1.37	2.3	1.13	3.0	1.25	2.4	1.32
3–4 days	18	2.7	0.97	2.8	1.00	3.7	0.83	2.2	1.11
5–6 days	14	3.9	1.17	3.5	1.16	3.6	1.16	2.9	1.23
everyday	67	4.4	0.90	4.4	0.99	3.9	1.03	3.8	1.21

Pearson's correlation coefficients were calculated between breakfast frequency, attitudes towards breakfast and PAQ-A scores. There were significant positive correlations ($P < 0.05$) between PAQ-A scores and breakfast frequency ($r = 0.2$) and between attitudes towards breakfast and breakfast frequency ($P < 0.01$) with the highest correlations observed between breakfast frequency and attitudes towards snacking behaviours. Breakfast skippers reported greater associations between preferring to snack at morning break and usually snacking at morning break ($r = 0.6$ and $r = 0.6$ consecutively).

These preliminary findings suggest associations between breakfast frequencies, attitudes towards breakfast and physical activity levels presenting an opportunity to improve understanding of the determinants of adolescent's breakfast habits.

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