Age, Sex & BMI are associated with different eating behaviour styles in Irish teens

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INTRODUCTION

Food choice can be influenced by a wide range of factors, which can in turn determine a person's eating behaviour style. Understanding people's eating behaviours can help tailor health promotion messages and interventions to be more effective. This research focusses on the association of eating behaviour styles with age, sex and Body Mass Index (BMI) among Irish teens. Eating behaviour data from the National Teens' Food Survey (NTFS1 2005/06 n=441, male 224; female 217) were analysed.

AIM

To determine the eating behaviour styles most common among Irish teens, and to explore factors associated with these styles.

METHODS

The Dutch Eating Behaviour Questionnaire (DEBQ) contains 33 items, which make up 3 scales: Restraint (10 items), Emotional (13 items), External (10 items). All items are answered on a 5-point Likert scale. Mean scores are calculated by dividing the sum of responses by the number of items in the scale, the highest score being 5. These scales determine the eating behaviour styles.

Descriptive statistics, non-parametric Wilcoxon-Mann-Whitney U tests & Kruskal-Wallis tests, one-way ANOVA with post-hoc Tukey analysis, and Spearman correlations were run to test associations between age, sex and BMI and the 3 DEBQ scales. Data were analysed for the whole group and stratified by sex and age groups (younger;13-14, older;15-17). BMI categories were determined using age- and sex-specific IOTF cut-offs (normal, overweight, obese)¹.

RESULTS

Descriptive statistics for the whole-group analysis are shown in Table 1. The highest mean score was shown on the External scale.

Table 1: Whole-group scores for DEBQ scales

DEBQ Scale	N=	Mean Score	SD	Min	Max	% group*
Restraint	432	1.79	0.84	1.0	4.6	14.4%
Emotional	435	1.84	0.80	1.0	4.69	5.9%
External	432	2.83	0.72	1.1	4.8	76.9%

*2.7% had equal scores on two scales

Stratified analysis showed significant differences in eating behaviour styles for males and females, and for younger and older teens.

- Females showed more emotional ($P<0.001$), restrained ($P<0.001$) and external ($P=0.037$) eating behaviour styles than males (Figure 1).
- Older teens showed more emotional ($P<0.001$) and external ($P=0.005$) eating behaviour styles compared with younger teens (Figure 2).

Figure 1: Sex comparison results for eating behaviour scores

RESULTS

Figure 2: Age-group comparison results for eating behaviour scores

BMI was positively correlated with the restraint scale for both males ($r=0.18$, $P=0.007$) and females ($r=0.337$, $P<0.001$), and with the emotional scale for females ($r=0.153$, $P=0.026$).

On the restraint scale, when comparing BMI categories, teens classified as overweight ($P<0.001$) and obese ($P=0.005$) scored higher than those classified as normal weight (Figure 3). Similar associations were observed when stratified by sex and age-group.

Figure 3: Association between BMI Categories and Restraint Scores

CONCLUSIONS

- Overall, Irish teens' respond to **external factors**, such as the sight or smell of food, when determining their primary eating behaviour style.
- Females respond more to **emotional cues** for eating, and display more **restrained eating** styles than males.
- Older teens display more **emotional and external** eating behaviour styles than younger teens.
- BMI is mostly associated with **restrained eating**:
 - Heavier teens tend to be more aware of what they eat and make focussed food choices to prevent weight gain.

TAKE HOME MESSAGE

- When targeting food choice messages to teens, a "one-size-fits-all" model may not be appropriate.
- Multiple factors, including age, sex and BMI differences, should be considered in health promotion messages and interventions to encourage a positive change in healthy eating behaviours.

REFERENCES

- Cole TJ, Bellizzi MC, Flegal KM, Dietz WH. (2000). Establishing a standard definition for child overweight and obesity worldwide: international survey. *BMJ*.320:1240-3.