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Gender differences in dietary behaviours, body mass index, and alcohol consumption patterns amongst first-year undergraduate students: preliminary findings from a multi-campus university in Ireland

K.-M. McCarthy¹, C. O'Neill¹, J. Walton² and A. Bickerdike¹

¹Department of Sport, Leisure and Childhood Studies, Munster Technological University, Bishopstown, Cork, Ireland

²Department of Biological Sciences, Munster Technological University, Bishopstown, Cork, Ireland

The transition to higher education (HE) constitutes a prime opportunity for intervention to address the sub-optimal dietary behaviours (low intake of fruit and vegetables (F&V), infrequent breakfast consumption [BC]), clinically-relevant gains in body mass, and hazardous alcohol consumption (HAC) patterns that have been reported amongst international HE student cohorts^(1,2). To inform such interventions, the current cross-sectional study aimed to explore gender differences in habitual F&V consumption, BC, body mass index (BMI), and HAC among first-year undergraduates at a multi-campus university in Ireland.

A 42-item web-based questionnaire was distributed by e-mail to first-year undergraduate students across the university's six campuses in semester 1 of 2022/23 (Wave 1) and was repeated in semester 1 of 2023/24 (Wave 2), supplemented by in-class recruitment. Participants met the inclusion criteria if they were a full-time first-year student, and were aged ≥ 18 years. Participants were asked to quantify their daily servings of F&V (serving defined as 1 piece of fruit, or 3 dessertspoons of vegetables). Habitual BC (days) were reported (weekdays: 0-5, weekend days: 02) and BMI [kg/height(m)²] was calculated from self-reported height and body mass. The AUDIT-C scale (range 0-12) was used to identify HAC on the basis of previously-reported sex-specific threshold scores⁽³⁾ (females ≥ 5 and males ≥ 6). Between-gender differences were examined using Chi-Squared Tests for Independence (categorical data) or Mann-Whitney U Tests (non-parametric continuous data). The level of significance was set at $p < 0.05$.

Overall response rate (W1/W2 combined) was 19.0%, (n = 1910, 54.9% female, mean age 19.7 \pm 4.0). Median number of F&V servings per day was 4.0 (IQR \pm 3.0), with 35.7% reporting ≥ 5 servings. A significantly higher proportion of females reported consuming ≥ 5 daily servings of F&V, compared to males (38.6% vs. 32.2%, $p = 0.007$). In total, 36.4% reported consuming breakfast on all weekdays, whilst 54.4% reported consuming breakfast on both weekend days. Males reported significantly more frequent BC than females on all weekdays (43.7% vs. 35.2%) and weekend days (64.4% vs. 53.4%, $p < 0.01$). In terms of BMI, 7.8% of students were classified with underweight (males: 6.6%, females: 8.8%), 61.0% with normal weight (males: 60.7%, females: 61.4%), 22.1% with overweight (males: 24.5%, females: 20.1%) and 9.1% with obesity (males: 8.3%, females 9.8%). The majority (89.9%) of students reported consuming alcohol, and 65.9% exceeded sex-specific HAC thresholds (males: 70.3% vs. females: 62.5%, $p < 0.01$).

The current study has served to highlight sub-optimal dietary behaviours amongst a cohort of first-year undergraduate students in Ireland. A concerning prevalence of overweight and obesity was also observed, and HAC was prevalent amongst 65.9%. Males appeared to exhibit less favourable behavioural patterns than females in terms of F&V intake and HAC. These findings will inform targeted 'life-course' interventions aimed at improving dietary and health related behaviours within the transformative setting of higher education.

References

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