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## Lunchtime observation in adults in free-living settings: dietary intake, compliance and participant experiences

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Direct diet observation is a useful method for comparative validity studies of self-report methods of diet assessment<sup>(1)</sup> and is commonly used in children in school settings<sup>(2–4)</sup>. Diet observation has been used in adult method comparison studies but these are usually in research or laboratory settings<sup>(5,6)</sup>, which may heighten the awareness of foods and drinks consumed and enhance subsequent recall, and can be inconvenient in terms of travelling and time.

In the Patterns of Eating and Activity Study (PEAS) III, adults ( $n$  71; mean age 34.4 (SD 11.1) years; 61.0% female) were invited to participate in four lunchtime-observation sessions that took place at their workplace or place of education (higher education colleges and universities) in designated eating areas. Trained researchers observed the lunchtimes and recorded foods and drinks observed, estimated portion sizes and amounts consumed. At the end of study, participants were invited to complete a feedback questionnaire.

At least one lunchtime observation session was attended by fifty-five participants (71% of total), with thirteen participants (17%) attending all four sessions. Mean (SD) energy intake was 1.7 (SD 0.6) MJ per lunchtime; fat intake was 13.4 (SD 7.2) g per lunchtime; and fruit and vegetable intake was 0.9 (SD 0.7) portions per lunchtime. Reasons for non-attendance of sessions included lunchtime meetings; part-time and shift working; not attending college/university that day; and the inconvenience of leaving work stations. Feedback from the participants indicated that for some the lunchtime-observation sessions were inconvenient and difficult to fit in with work commitments ( $n$  8); although, some reported that the sessions were a small commitment and 'didn't take up any extra time' ( $n$  6). Discomfort while being observed was reported ( $n$  3) with one participant referring to observers as 'cctv'. However, a positive social experience of the sessions was also highlighted ( $n$  9) as participants were able to meet other participants and some saw it as a 'good excuse to have a lunch break'.

Workplaces and places of higher education are promising settings for diet assessment method comparison studies in adults using diet observation as a reference method; however, a number of limitations exist. The use of familiar settings may help to minimise awareness of diet intake and minimise behaviour change, but it remains difficult to eliminate these potential biases as it is difficult to 'blind' diet observation in practice. Using workplace and education settings will also exclude a proportion of the adult population, including those who are retired, homemakers, carers and unemployed and not in education.

1. Mertz W (1992) *J Am Diet Assoc* **92**, 1463–1465.
2. Baranowski T, Islam N, Baranowski J *et al.* (2002) *J Am Diet Assoc* **102**, 380–385.
3. Warren JM, Henry CJK, Livingstone MBE *et al.* (2003) *Public Health Nutr* **6**, 41–47.
4. Baxter SD, Royer JA, Hardin JW *et al.* (2007) *J Nutr Educ Behav* **39**, 126–133.
5. Conway JM, Ingwersen LA, Vinyard BT *et al.* (2003) *Am J Clin Nutr* **77**, 1171–1178.
6. Beasley J, Riley W & Jean-Mary J (2005) *Nutrition* **21**, 672–677.