

The 13th European Nutrition Conference, FENS 2019, was held at the Dublin Convention Centre, 15–18 October 2019

## Assessing water intake of adults during consultation: the striking discrepancy between a prospective record, an open and a frequency question

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### Abstract

Health care professionals often ask their patients questions about their water intake, or water drinking frequency. The aim of the present analysis was to compare 3 questions (prospective 7-day fluid record, an open question (OQ) and a frequency question (FQ)) used to record the volumes of water drunk.

8159 participants (18–65 years) from Argentina, Brazil, China, Indonesia, Mexico and Uruguay completed a validated 7-day fluid intake record. For each drinking event, the volume consumed was recorded. On day 8, participants answered the following questions: “On average, what is your daily intake of water? (Tap water, bottled still and/or sparkling water)” and “How often do you consume drinking water (tap water, bottled still and sparkling water): at least once a day or several times a day?”.

When asked about the amount of water consumed, 63–76% of participants in all countries, except for Uruguay and Indonesia, estimated their water intake to be 1–2L to 2–3 L/day, 75–88% of participants reported drinking less than 1L of water/day in the record. In Uruguay, 74% of participants reported in the OQ drinking less than 0.4 L/day and 8% drinking 2–3 L/day, while the 7-day record showed that 56% drank less than 0.4 L/day, 2% drank 2–3 L/day and 32% drank 0.4 L/day. In Indonesia, 17% of participants didn't know how much they drank when asked the OQ. Moreover, 7% estimated drinking  $\geq 3$  L/day when asked the OQ while only 21% recorded this amount. When comparing water intake reported through the FQ and the 7-day record, 34–75% of participants accurately reported drinking water at least once a day. Nevertheless, in Indonesia, where the mean water intake was high (2.16 L/day), only 1% of participants reported drinking water at least once a day but actually drank water less frequently. In the other countries, where the mean water intake was lower (0.49–0.76L/day in Uruguay and Brazil respectively), 20–42% of participants reported drinking water at least once a day but actually drank water less frequently.

Despite recently recording their water intake for 7 days, it was still difficult for adults to estimate how much and how often they drank when asked a single question. These results suggest a lack of awareness in adults of frequency and volume of water intake and illustrate the need for quick, valid methods that health care professionals can use to assess water intake.

### Conflict of Interest

CM and IG are full time employee of Danone Research. JS-S, LAM, SAK, JG, HM are members of the advisory board on fluid intake of Danone Research, and have received consultancies from Danone Research. SAK had active research grants from Danone Research and is a scientific consultant for Standard Process. JS-S and LAM has received consultancies from Danone S.A.