Design of a beverage visual guide to facilitate data collection in research studies

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Introduction: Quantification of water and beverage intake is an emerging topic in nutritional sciences. Different sizes in glasses, cups, bottles and cans have been observed, which contributes to the difficulty in data collection.

Objective: To design a visual beverage guide in order to facilitate data collection in nutritional studies.

Method: Pictures were taken with a Nikon Coolpix S2800 Digital Camera from 20MP at one of the largest food retailers in Spain, in different cafeterias in the city of Madrid and our laboratory. Different types, brands and sizes of drinks, like water, coffee, beer and wine were photographed, allowing the identification and recognition of that amount in different glasses and cups, to estimate any amount of ingested fluid.

Results: A total of 43 photographs were taken. The guide was divided into two parts. In the first part, volumes of liquids are presented in different glasses and cups available. In the second part, different sizes of bottles, cans, etc., are presented. Most of bottles and cans have the amount of fluid in the back of the pack, which makes fluid amount identification more difficult.

Conclusions: A specific beverage visual guide has been developed to facilitate data collection, in order to avoid under and over-reporting in nutrition surveys.

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Key words: beverages, nutrition, visual guide, hydration.

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Does seasonality affect fluid intake?

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Introduction: The proportion of elderly population is increasing globally; however, there are few studies on fluid intake in older adults and specifically on beverage intake throughout the seasons.

Objective: To evaluate the effects of changes on fluid intake according to the four seasons in Spanish elderly people.

Method: Twenty-eight Spanish subjects aged over 55 years (60.7% females) performed a longitudinal study during one year. Subjects completed in each season a 24-hour dietary recall. Fluid intake was calculated using the DIAlfood composition computer program (AlceIngeniería, S.L.). Also, physical fitness status was evaluated performing two strength tests and subjects were divided into 2 fitness groups (fit and unfit). Data was analyzed using one-way repeated measures.

Results: Beverage intake was higher in summer than in winter (p=0.001), spring (p=0.008) and autumn (p=0.005). Water was the fluid most consumed in all seasons. Seasonal variation was highest for soft, diet drinks and beer. An interaction effect of sex, age, and fitness status was not observed (p>0.05).

Conclusions: Seasonality has an influence on fluid intake and should be considered when analyzing drinking behavior and water and beverage intake in research studies.

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Questionnaire design to facilitate water and beverage intake data collection in research studies

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Introduction: The difficulty to quantify water and beverage intakes well established in the literature, and consequently, under and over-reporting exists in nutrition surveys.

Objective: To design a specific questionnaire in order to obtain reliable data on water and beverage intake and drinking patterns in adults.

Method: A hydration questionnaire was created by the Research Group based on food-frequency and eating habits questionnaires published in the literature, taking into account the modern beverage market.