

Standardization of Nutritional Equivalency of Food Composition Database in Latin American Survey of Nutrition and Health (ELANS)



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INTRODUCTION

Dietary assessment consists of evaluation of food consumption and its conversion into nutrient values by using a food composition database. Between-country comparisons are particularly prone to error when different databases are used to estimate nutrient intake. In this sense, standardize a food composition database across countries is an important step to have consistent country comparison regarding nutritional

OBJECTIVE

This epidemiological research aims to describe the methodological concepts and procedures involved in the standardization of nutritional equivalency of food composition database across 8 Latin American countries.

METHODS

ELANS is a household-based multi-national cross-sectional survey to be conducted in a representative urban sample of 8 Latin American countries:

▪ **Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Peru and Venezuela**

Sample

▪ 8,000 subjects (based on a complex multistage probability sample design **stratified by conglomerates**)

▪ Both genders

▪ Age: 15 to 65 years old

▪ Socioeconomic levels: high, medium and low strata

Dietary intake data

A standard study protocol was design to investigate nutritional intake in all countries enrolled, using the following instruments:

▪ Two 24-hour dietary recall (24-HR) using Multiple Pass Method (8 days a part);

▪ Food **Frequency Questionnaire (for beverages intake)**;

▪ Quality of the acquired information will be checked;

▪ Quantification of dietary intake will be conducted using national published data concerning the quantities of household measures and recipes;

▪ Data from the 24-HR will be entered into the Nutrition Data



Nutritional Equivalency of Food Composition Database

- Each country will realize a nutritional equivalency between the 300 foods contained in the NDS-R and the national food composition database (to be increased with data collection);
- It consists of comparing local foods to the foods actually available in NDS-R database, according to energy and macronutrient composition;
- A concordance rate between 80% and 120% for energy and macronutrient content is considered adequate to establish food selection from this database;
- Alternative approaches to approximate nutrient contents are considered if no equivalent foods are found in NDS-R database (e.g. raw-to-cooked, recipe calculation or averaging calculation);
- Typical regional dishes are provided by national publications and will be computed in the software as standard recipes, using the equivalent foods (previously evaluated).

Protocol and Ethical Approvals

The overarching ELANS protocol was approved by the Western Institutional Review Board (#20140605) and registered at Clinical Trials (#NCT02226627). Each site-specific protocol was also approved by the ethical review boards at the participating institutions.

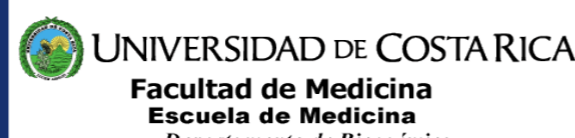
CONCLUSION

- Using this method of standardization will likely minimize systematic and random errors in nutrient intake estimations and will allow comparisons between these Latin American countries.
- This is an important initiative for harmonization of dietary assessment that could be applied in a standardized manner in different populations and could therefore generate comparable dietary data in multicenter epidemiological studies.

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