Diet Patterns in Argentinean adults

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Background

- Dietary patterns (DP) have been used to identify different combinations of foods that may be associated with mortality and risk of chronic disease.

Objective

- To identify diet patterns (DP) in the adult population of Argentina, and explore associations with sex, age, and educational level.

Methods

- CESCAS I is an observational prospective cohort study with a multistage probabilistic sample of 7524 participants aged 35-74 years, from 4 mid-size cities in the Southern Cone of Latin America.
- Cross-sectional study (baseline data) among 2752 Argentinean adults, from Marcos Paz and Bariloche.
- Dietary intake was estimated using a self-administered 126-item validated food frequency questionnaire.
- Socio-demographic variables were assessed by a questionnaire administered by an interviewer.
- Principal component Analysis (PCA) was used to identify diet patterns. The factors were rotated by an orthogonal transformation (Varimax rotation).
- A summary score for each pattern was derived and used in multiple regression analysis to examine the relationship between DP and socio-demographic variables.

Results

- Using PCA, we identified 3 major eating patterns (Table 1), which explained 25% of the total variance.

- **Factor 1 (Traditional diet pattern)** was characterized by a high intake of refined grains, red meat, whole- fat dairy products, vegetable oils and other fat spreads, and “mate”, a traditional South American drink.
- **Factor 2 (Prudent diet pattern**), was characterized by a high intake of vegetables, fruit, low-fat dairy products, whole grains, and legumes.
- **Factor 3 (Convenience and processed food diet pattern)** consisted mainly of processed meat, snacks, pizza, and “empanadas”, a stuffed bread baked or fried.

Table 1. Factor-loading matrix for the major factors (DP)*

Food groups	Traditional	Prudent	Convenience and Processed foods
White bread and crackers	0.61		
Red meat (Beef)	0.59		
Sugar/marmalade/jam	0.58		
Other fat spreads (butter/margarine/lard)	0.55		
Vegetable oils	0.50		
Pasta/refined cereals/rice	0.48		
Poultry	0.45		
High-fat dairy products	0.43		
Mate	0.40		
Eggs	0.40		
Potatoes and other starchy vegetables	0.38	0.30	
Cookies	0.36		
Mayonnaise	0.35		
Other vegetables		0.72	
Dark-yellow vegetables		0.68	
Green Leaf vegetables		0.63	
Fruits		0.61	
Legumes and whole grains		0.42	
Low-fat dairy products		0.39	
Tomatoes		0.36	
Cereal bars/breakfast cereal		0.36	
Processed meats	0.37		0.66
Snacks			0.54
Other red meats			0.52
Pizza and “empanadas”			0.47
Confectionery	0.32		0.34
Organ meat			0.33
Sweets and desserts			0.34
Variance explained(%)	9.7	8.1	7.7

*Varimax rotation. Foods/food groups with factor loadings <0.30 were not listed.

Table 2. Multiple, regression-derived coefficients (β), standard errors (SE) and 95% confidence intervals of demographics predictors for the three factors

Factor 1: "Traditional" DP	β	SE	P	95% Conf. Interval
Age (per 10-year increment)	-0.06	0.01	0.000	-0.09; -0.03
Female	0.28	0.15	0.064	-0.09; 0.03
Education (≥12y)	-0.29	0.04	0.000	-0.37; -0.20
Factor 2: Prudent" DP				
Age (per 10-year increment)	0.08	0.01	0.000	0.5; 0.11
Female	0.38	0.04	0.000	0.30; 0.45
Education (≥12y)	0.38	0.05	0.000	0.28; 0.49
Factor 3: “Convenience and processed foods" DP				
Age (per 10-year increment)	0.03	0.01	0.053	-0.00; 0.06
Female	-0.10	0.03	0.004	-0.17; -0.03
Education (≥12y)	0.23	0.05	0.000	0.13; 0.33

All models were adjusted for total energy intake and site.

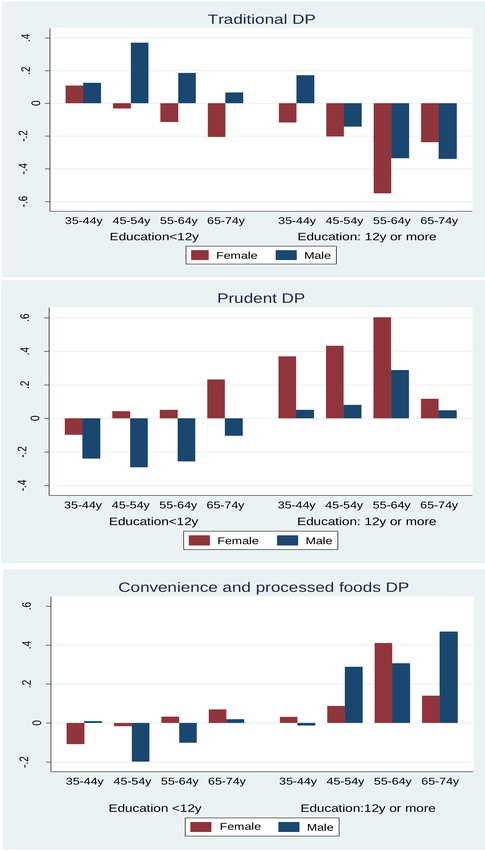


Figure. Dietary pattern scores by age, sex and level of education

- **After adjusting for energy intake, dietary pattern scores were associated with age, gender, and educational level** (Table 2 and Figure)

Conclusions

- Local diet patterns have been identified in our population.
- This study provided useful information to set priority targets for nutrition interventions, and promote healthy policies based on local food habits.