

Fluid and total water intake: Demographic and lifestyle determinants in the PREDIMED-PLUS study

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Background: Adequate water intake reference values had been established by the European Food Safety Agency (EFSA) in order to prevent dehydration. Although sociodemographic and lifestyle determinants on fluids consumption and water intake have been poorly studied.

Methods: Cross-sectional analysis in a sub-sample of participants from the PREDIMED-Plus study. Water intake and beverages consumption was assessed by a validated fluid-intake specific questionnaire and by a FFQ. Multivariable logistic regression models were used to assess the odds ratio (OR) and 95% confidence interval (CI) for complying with EFSA recommendations for Total Water Intake (TWI) and Total Water Intake from Fluids (TWIF) and the joint association of Mediterranean Diet (MedDiet) adherence and moderate-vigorous physical activity (MVPA) according various sociodemographic and lifestyle factors.

Results: General characteristics of the studied population and the mean volume fluid intake and beverages consumption can be observed in Table 1. Compliance with TWI recommendations was associated with being women (5.34; 3.85, 7.42), high adherence to MedDiet (1.16; 1.02, 1.31) and more engagement in physical activity (1.07; 1.00, 1.15). Similar results were observed for compliance with TWIF (Figure 1). Participants with higher adherence to MedDiet and meeting WHO recommendations for MVPA, complied better with the recommendations (Figure 2).

Table 1. General characteristics of the studied population.

Variables	N=1902
Age, years	65 ± 5
Women, % (n)	50.3 (957)
BMI, kg/m ²	32.6 ± 3.5
Education, % (n)	
Primary education	52.5 (998)
Secondary education	27.7 (527)
Academic or graduate	19.8 (377)
Smoking habit, % (n)	
Never smoked	46.1 (877)
Former smoker	41.9 (796)
Current smoker	12.0 (229)
Sedentary time, h/day	6.1 ± 2.0
Physical activity, min/sem.	459 ± 384
MedDiet Adherence (14 points)	7.9 ± 2.0
Consumption of various of beverage (ml/day)	
Drinking water (ml/day)	1022 ± 454
Hot beverages (ml/day)	236 ± 213
Milk and derivates (ml/day)	259 ± 213
Soups and vegetable juices (ml/day)	57 ± 94
Sugar-sweetened beverages (ml/day)	117 ± 203
Artificially-sweetened beverages (ml/day)	38 ± 133
Alcoholic beverages (ml/day)	150 ± 267
Other beverages (ml/day)	54 ± 143
Total daily fluid volume (ml/day)	1934 ± 617

Data expressed as means ± SD or percentage (n).

OR (95%) between different sociodemographic and lifestyle factors and compliance with EFSA recommendations for TWI and TWIF.

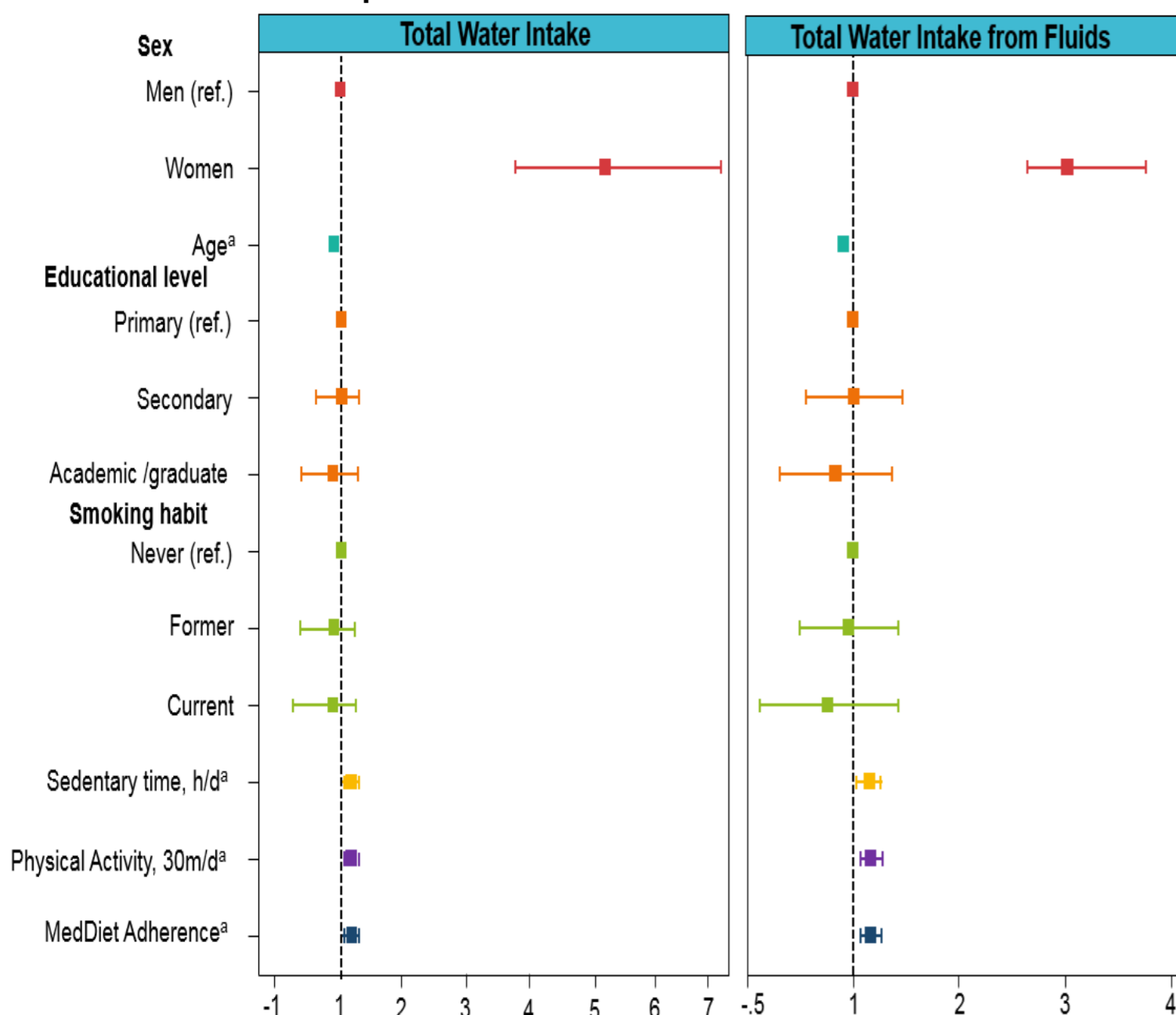


Figure 1. Multivariable results (simultaneous adjustment). Model also adjusted by recruitment centre.

OR (95%) for compliance with EFSA's TWI recommendations for joint associations of MedDiet adherence and MVPA

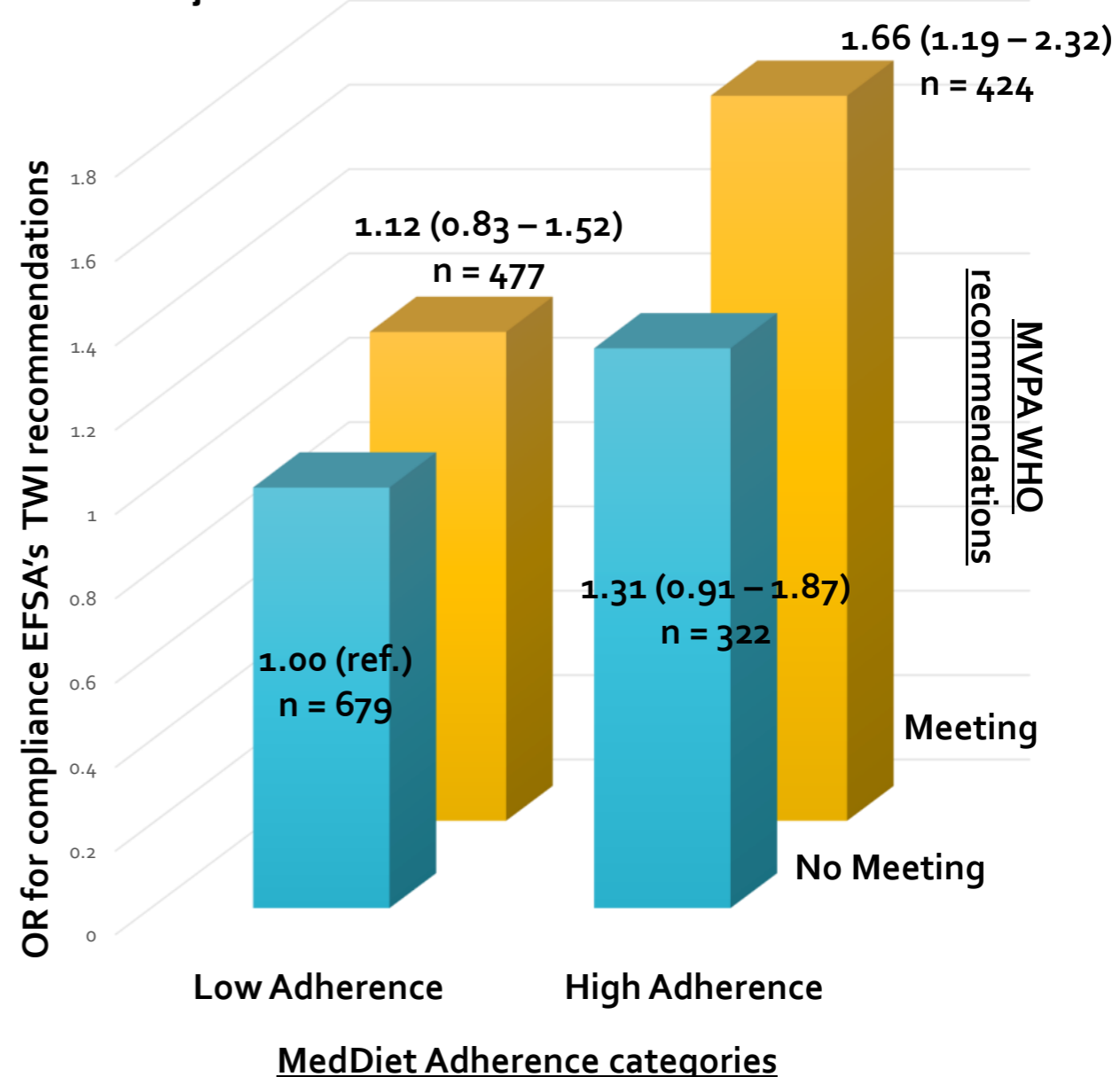


Figure 2. Adjusted model for age, sex, educational level, smoking status and recruitment centre.

Conclusions: High compliance with TWI recommendations was positively associated with being woman, and a healthy lifestyle characterized by high adherence to MedDiet and increased physical activity.

Acknowledgements: This trial was supported ISCIII, through the Fondo de Investigación para la Salud (FIS), (PI13/00462, PI16/00501). Additional grants: the Especial Action Project and the Recercaixa-grant (2013ACUP00194), granted to JS-S and FEDER funds (CB06/03). IP-G receives a Grant from the Spanish Ministry of Education, Culture and Sports (FPU 17/01925).

