

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

## Gender inequalities in diet quality and their socioeconomic patterning in a nutrition transition context in the MENA region

Mohamed Mehdi Abassi<sup>1,2</sup>, Jalila El Ati<sup>2</sup>, Sonia Sassi<sup>1,2</sup>, Houda Ben Gharbia<sup>2</sup>, Francis Delpeuch<sup>3</sup> and Pierre Traissac<sup>4</sup>

<sup>1</sup>Faculté des Sciences de Tunis, Université Tunis El Manar, Tunis, Tunisia,

<sup>2</sup>INNTA (National Institute of Nutrition and Food Technology) & SURVEN (Nutrition Surveillance and Epidemiology in Tunisia) Research Laboratory, Tunis, Tunisia,

<sup>3</sup>IRD (French National Research Institute for Sustainable Development), NUTRIPASS Unit, IRD - Université de Montpellier - SupAgro Montpellier, Montpellier, France and

<sup>4</sup>IRD (French National Research Institute for Sustainable Development), NUTRIPASS Unit, IRD - Université de Montpellier - SupAgro Montpellier, Montpellier, Tunisia

### Abstract

**Introduction:** The Middle East and North Africa region features marked gender excess adiposity inequalities detrimental to women in a context of nutrition transition with major shifts in lifestyle and diet. We assessed gender inequalities in dietary intake with a focus on diet quality. Sociodemographic patterning of these gender dietary inequalities was explored.

**Methods:** A cross-sectional study in the Greater Tunis region (Tunisia) in 2009–2010 surveyed 20–49 y old adults of both genders (women n = 1689, men n = 930) using a stratified, two-stage cluster sample. Dietary intake was assessed using a 3-day food record. We assessed diet quality by the Diet Quality Index-International (DQI-I) /100 and sub-components (variety, adequacy, moderation, balance); DQI-I > 60 defined good diet quality. Gender inequalities measures were women vs. men differences of means for interval variables and odds-ratios (OR) for DQI-I > 60. Their variation with sociodemographic characteristics were estimated by models featuring gender x covariate interactions.

**Results:** Mean energy intake in kcal was  $2300 \pm 15$  for women vs.  $2859 \pm 32$  for men. By 1000 g/kcal/day women consumed more fruits and sweets but less red meat and soft drinks than men. Mean DQI-I was lower among women vs. men ( $58.6 \pm 0.3$  vs.  $60.4 \pm 0.3$ , diff =  $-1.8[-2.6;-1.0]$ ,  $P < 0.0001$ ) as well as proportion of DQI-I > 60 (45.2% vs. 55.7%, OR =  $0.7[0.5;0.8]$ ,  $P < 0.0001$ ). Gender differences varied with the 4 sub-components: women vs. men had lower mean variety ( $10.1 \pm 0.1$  vs.  $12.1 \pm 0.2$ , diff =  $-2.0[-2.3;-1.6]$ ,  $P < 0.0001$ ) and adequacy scores ( $30.8 \pm 0.1$  vs.  $32.5 \pm 0.1$ , diff =  $-1.8[-2.0;-1.5]$ ,  $P < 0.0001$ ) (for the latter they scored a little better than men for the fruit item, but had much lower scores than men for iron and also calcium). But women scored better than men on the moderation score ( $14.2 \pm 0.2$  vs.  $12.3 \pm 0.2$ , diff =  $+1.8[1.4;2.2]$ ,  $P < 0.0001$ ), mostly due to their better score on the cholesterol and sodium items. There was no difference for the balance subcomponent. Adjusted gender inequalities in DQI-I decreased with age, were higher in larger households and were also higher in the extreme categories of education i.e. no-schooling and university vs. the middle categories.

**Conclusions:** Diet quality was overall average. It was lower for women than men. Women vs. men differences in diet quality varied somewhat according to sociodemographic indicators linked to different gender roles. We also showed that gender contrasts depend on which dimension of diet quality is considered (better moderation but worse adequacy and variety for women). That maybe a pathway for gender specific prevention.

### Conflict of Interest

There is no conflict of interest