METHODOLOGY: A convenience sample of community-dwelling individuals ≥18 years old, with no severe, long-term or end-stage chronic diseases, was selected. Total LBM was estimated by dual energy x-ray absorptiometry (DXA) using a Hologic Horizon-Wi densitometer. Bioelectrical resistance and reactance were measured with an ImpediMed SFB7 spectroscope (256 frequencies between 3 kHz and 1000 kHz), and were used to calculate FFM estimates using 9 gender-specific equations (Deuremberg, Kyle, Sun, Gray, Reubenoff, Lukaski, Matias, Chumlea, Houtkooper) which were compared with DXA-derived LBM using Pearson correlation and t-tests for paired samples. Continuous variables are presented in means ± standard deviations.

RESULTS: A total of 335 individuals (aged 39.0±14.2 years old, age range 18-79 years, 67% women) were included, with a body mass index of 23.7±3.7 kg.m-2 and DXA-derived total body fat of 28.4±8.4%. LBM was 47.11±11.16 kg. FFM estimates ranged from 43.61±9.52 kg (Reubenoff) to 51.14±12.44 kg (Matias). The Gray and the Lukaski equations conveyed the closest approximation to LBM (47.31±10.11 kg, r=0.943, mean difference -0.20±3.73 kg, t=-0.75, p=0.344, and 47.33±10.6 kg, r=0.956, mean difference -0.23±3.28 kg, t=-1.21, p=0.227, respectively).

CONCLUSIONS: The Gray *et al*. (1989) and the Lukaski *et al*. (1991) equations were precise at estimating FFM from BIA in community-dwelling healthy Portuguese individuals. Further agreement analysis and external validity of these results are warranted.

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CO18. DIETARY PATTERNS FROM CHILDHOOD INTO EARLY ADOLESCENCE: ASSESSING THE STABILITY OF HEALTHY AND SUSTAINABLE DIETS

Beatriz Teixeira[1-3]; Cláudia Afonso[1-3]; Alexandra Costa[1,2,4]; Carla Lopes[1,2,4]; Andreia Oliveira[1,2,4]

[1] EPIUnit – Instituto de Saúde Pública da Universidade do Porto

[2] Laboratório para a Investigação Integrativa e Translacional em Saúde Populacional (ITR)

[3] Faculdade de Ciências da Nutrição e Alimentação da Universidade do Porto

[4] Faculdade de Medicina da Universidade do Porto

INTRODUCTION: Healthy diets from sustainable food systems are warranted across life, however little is known about their tracking with time, specifically in pediatric ages.

OBJECTIVES: To assess the stability of healthy and sustainable diets from childhood into early adolescence.

METHODOLOGY: Participants were 2951 children from Generation XXI cohort, who provided 3-day food diaries on at least 2 follow-ups considering the 7, 10, and 13 years-old. Adherence to the Eat-Lancet dietary recommendations was assessed with the World Index for Sustainability and Health (WISH) adapted for pediatrics. WISH includes 13 food groups (grains, vegetables, fruits, dairy, red meat, fish, eggs, white meat, legumes grains, nuts, unsaturated fats, saturated fats, soft drinks and added sugars) with a variation range 0-130 (the higher the score, the greater the adherence to a healthy and sustainable diet). Mixed effects models were used to assess the trajectory over time with an interaction by sex. The model included two linear and quadratic fixed effects and a random intercept per individual. Intra Class Correlation coefficients (ICCs) were calculated to assess stability across age.

RESULTS: WISH mean scores at ages 7, 10, and 13, were 59.9, 53.2, and 48.7, respectively. The WISH score had a stability of 24% (ICC=0.24) with a declining trend across age (β' for age=-2.43;95%CI-2.84, -2.03) from the ages 7 to 13. However, a deceleration of the decrease as children aged was observed (β' for the quadratic term of age=0.12;95%CI 0.06,0.18). This downward trend was different by sex: WISH scores declined more rapidly for boys than for girls between the ages of 7 and 13 (β' for sex=-0.26;95%CI-0.48,-0.05).

CONCLUSIONS: Diets become less healthy and sustainable from childhood into adolescence, especially for boys, with a greater decline between the ages of 7 and 10. These findings emphasis the need to invest more in the promotion of better diets.

CO19. SEX DIFFERENCES IN THE ASSOCIATION BETWEEN PERCEIVED SOCIAL SUPPORT AND ADHERENCE TO THE MEDITERRANEAN DIET: PRELIMINARY RESULTS FROM THE MIND-MATOSINHOS TRIAL

Matilde Vicente[1-3]; Daniela de Sousa[2,3]; Ana Rute Costa[2-4]; Ana Henriques[2,3,4]; Vítor Tedim Cruz[2,3,5]; Patrícia Padrão[1-3]

[1] Faculty of Nutrition and Food Sciences of the University of Porto

[2] EPIUnit—Public Health Institute of the University of Porto

[3] Laboratory for Integrative and Translational Research in Population Health (ITR)

[4] Department of Public Health and Forensic Sciences, and Medical Education, Faculty of Medicine of the University of Porto

[5] Neurology Service of the Pedro Hispano Hospital, Matosinhos Local Health Unit

INTRODUCTION: Social support is a main determinant of healthy ageing. Its association with healthy eating habits, such as Mediterranean diet (MD) adherence, has been suggested. However, there is a lack of studies addressing this relationship among adults at high risk of dementia, especially exploring sex differences.

OBJECTIVES: To estimate the association between perceived social support and MD adherence among community-dwelling adults at high risk of dementia, according to sex.

METHODOLOGY: This cross-sectional study included baseline data from 126 participants in a randomized controlled trial to assess the effectiveness of non-pharmacological interventions to prevent cognitive decline (MIND-Matosinhos, Registration number: NCT05383443). Data on sociodemographics, lifestyles, health, anthropometrics and cognitive performance were collected in 2020/2022. Perceived social support was measured using the 3-Item Oslo Social Support Scale (OSSS-3), and good adherence to the MD was defined using the Portuguese version of the Mediterranean Diet Adherence Screener (MEDAS) questionnaire (≥10 points).

Stratified associations by sex between perceived social support and MD adherence were calculated as age- and education-adjusted Odds Ratios (OR) and 95% Confidence Intervals (95% CI) using logistic regression.

RESULTS: Participants had a median age of 70 years (range: 24-83 years), and 58.7% were female. High adherence to the MD was observed among 14.9% of females and 17.3% of males. For both groups, the median OSS-3 sum score was 11.0 (Interquartile Range=9-12). Among men, higher OSSS-3 sum scores were associated with good adherence to the MD (OR=2.23; 95% CI:1.06-4.69) but not in women (OR=0.80; 95% CI:0.57-1.11) (p for interaction=0.01).

CONCLUSIONS: Our preliminary results prompt a call for more in-depth research to explore these sex differences and their implications for designing interventions that promote healthy ageing. A larger sample size is needed to enhance our understanding of the complex relationship between social support and adherence to the MD in this vulnerable population.

CO20. A FOOD-LEVEL APPROACH TO IDENTIFY SUSTAINABLE FOODS AMONG THE MOST CONSUMED BY THE PORTUGUESE ADULT POPULATION

Mariana Rei[1-3]; Duarte Torres[1-3]; Colin Sage[1]; Sara Rodrigues[1-3]

[1] Faculty of Nutrition and Food Sciences of the University of Porto

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