



UNIVERSIDADE DE ÉVORA

LINKS BETWEEN NUTRITIONAL INTAKE AND QUALITY OF LIFE IN ADULTS WITH ACHONDROPLASIA

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INTRODUCTION

Achondroplasia is a rare skeletal dysplasia occurring in 1 case in 25 000 births [1]. It is characterized by short disproportionate stature with final adult height of -6.0 standard deviation score in both genders, which translates in a mean height of 130 cm in men and 125cm in women [1]. It is associated with musculoskeletal and neurological complications, altered mobility and obesity [2]. All combined, can impair physical function and quality of life (QoL). Nutritional factors may modulate these outcomes. This study analysed nutritional intake and its relationship with QoL in adults with achondroplasia.

METHODOLOGY

Sixteen adults with achondroplasia, 10 women (W) and 6 men (M), mean age 38.3±13.8 years, were assessed for nutritional intake and QoL, using a food frequency questionnaire (IAN-AF) [3,4] and the Short Form Health Survey (SF-36), with better outcomes related to higher scores. Descriptive analysis, t-student test and Pearson correlations between diet and SF-36 dimensions: Physical Function, Physical Role, Pain, General Health, Vitality, Social Function, Emotional Role, and Mental Health, were performed.



Figure 1. Adult woman with achondroplasia (left side). Credits: Anna Shvets

AIM

Analyse the nutritional intake and its relationship with quality of life (QoL) in adults with achondroplasia

RESULTS

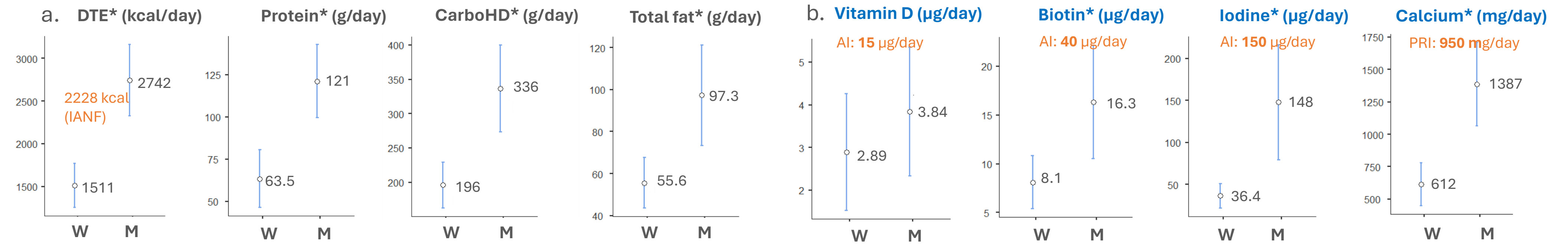


Figure 1. a. Macronutrients intake (grey) with IAN-AF reference value for men shown (in orange) and b. Micronutrients intake (blue) with Dietary Reference Values (European Food Safety authority- EFSA) (orange). * Significant mean difference between gender (p<0.001). W- Women, M- Men, DTE- daily total energy, AI - adequate intake (EFSA), PRI - population reference intake (EFSA).

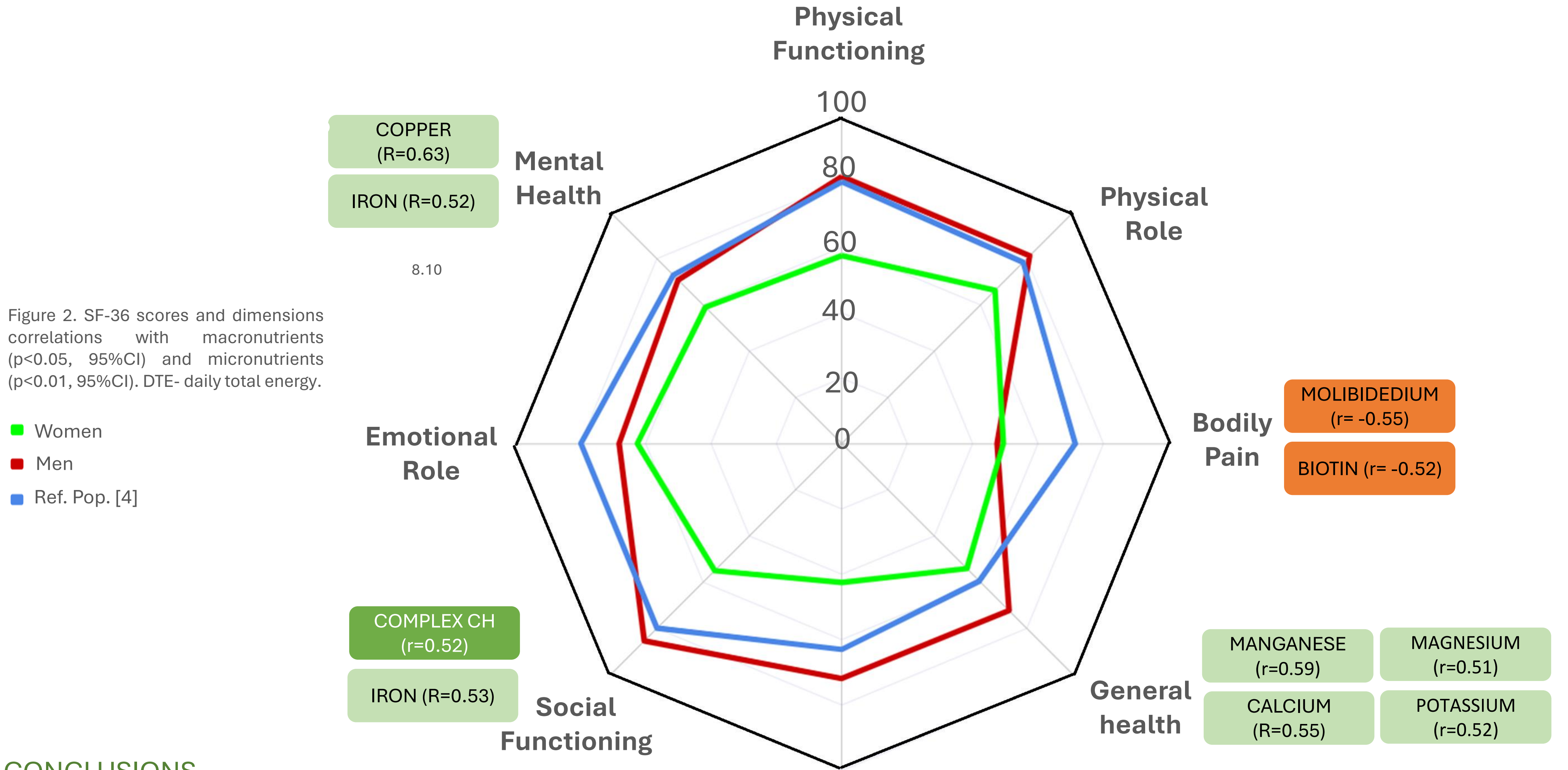


Figure 2. SF-36 scores and dimensions correlations with macronutrients (p<0.05, 95%CI) and micronutrients (p<0.01, 95%CI). DTE- daily total energy.

■ Women
■ Men
■ Ref. Pop. [4]

CONCLUSIONS

Low vitamin D, calcium intake and iodine in women stood out. The associations between several micronutrients and different SF-36 dimensions, support the importance of micronutrient adequacy in QoL. Further research is warranted on nutritional optimization for physical and psychological wellbeing in adults with achondroplasia.

DTE kcal (r=0.61)	COPPER (R=0.63)	IRON (R=0.61)
SUGARS (r=0.58)	MAGNESIUM (r=0.55)	MANGANESE (r=0.54)
COMPLEX CH (r=0.66)	POTASSIUM (r=0.58)	ZINC (r=0.54)

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