

# Health behaviour and eating habits among foreign students at the Instituto Politécnico de Bragança

Benjámín Ede Kiss<sup>1,2</sup>, Katalin Kelemen<sup>1,2</sup>, Vera Ferro-Lebres<sup>2</sup>, Juliana Almeida de Souza<sup>2</sup>, António José Gonçalves Fernandes<sup>3</sup>



<sup>1</sup>Department of Dietetics and Complementary Medicine - Faculty of Health Science - University of Pécs

<sup>2</sup>Departamento das Tecnologias de Diagnóstico e Terapêutica in área de estudo Dietética e Nutrição - Escola Superior de Saúde - Instituto Politécnico de Bragança

<sup>3</sup>Departamento Ciências Sociais e Exactas - Escola Superior Agrária - Instituto Politécnico de Bragança

✉: kiss1207@freemail.hu, katjes91@hotmail.com

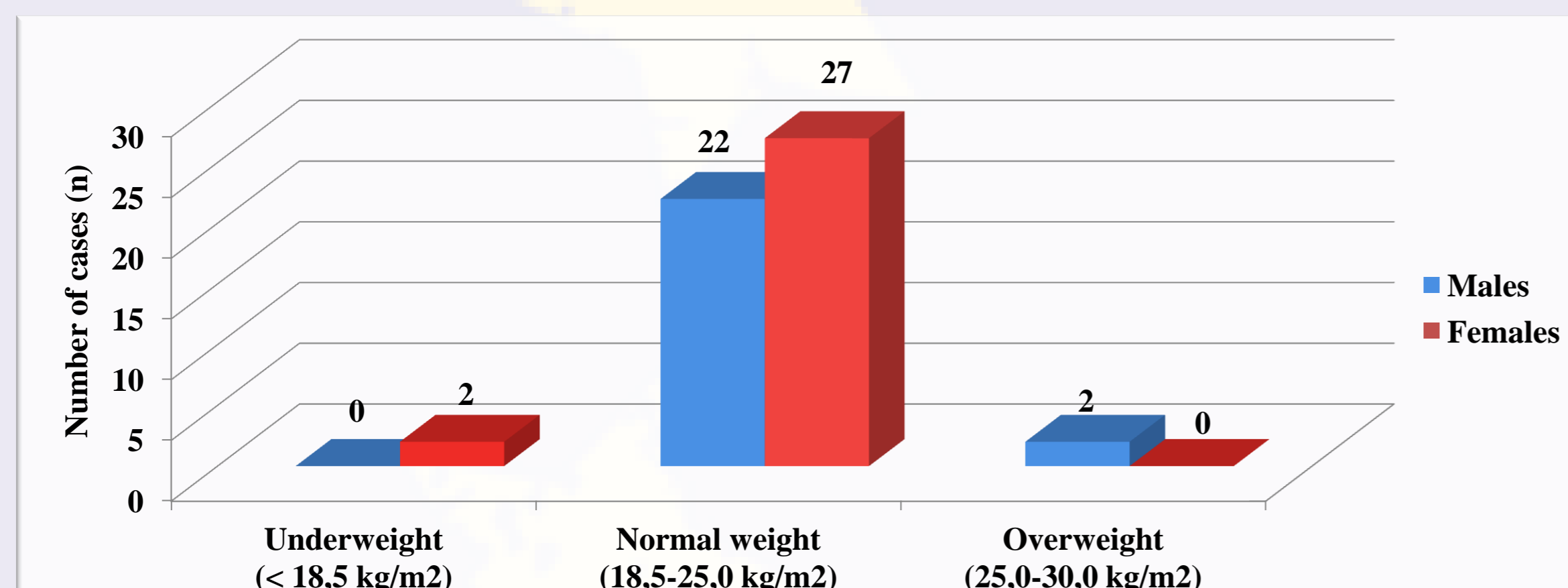


## 1. Introduction

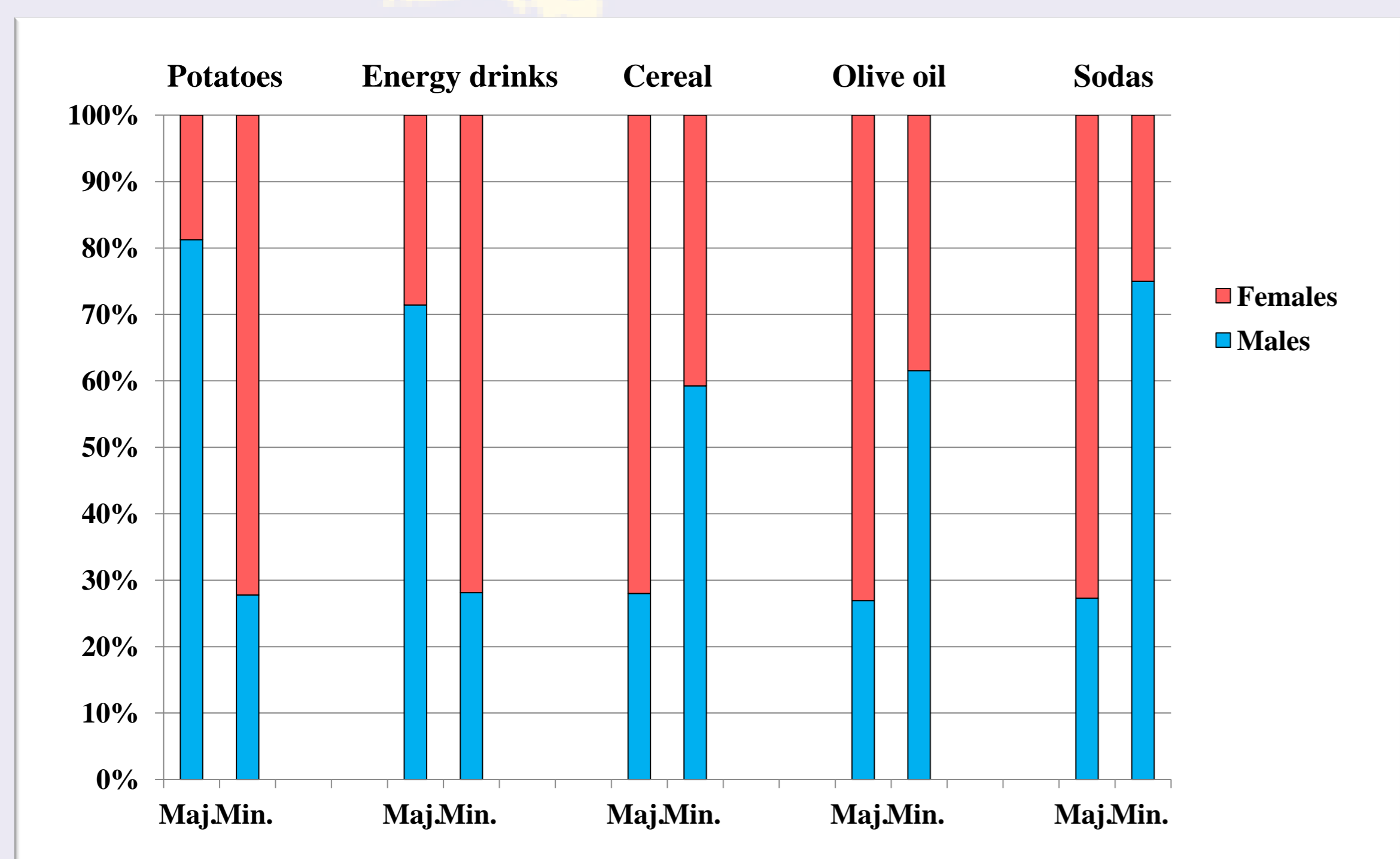
Several studies have addressed to assess the eating habits of university students, but only few studies are about the eating habits of foreign students. Previous studies found that the eating habits are changing in a negative way because of the limited availability and poor quality of familiar foods<sup>1,2</sup>.

The objective of this study was to determine the eating habits of the students before their arrival to Portugal. This is the first part of a longitudinal study, our final aim is to establish the changes on the eating habits and health behaviour of students from abroad during their scholarship.

## 3. Results



Graph 1: The distribution of BMI according to WHO's classification system (n=53, p=0,045, r=0,276)



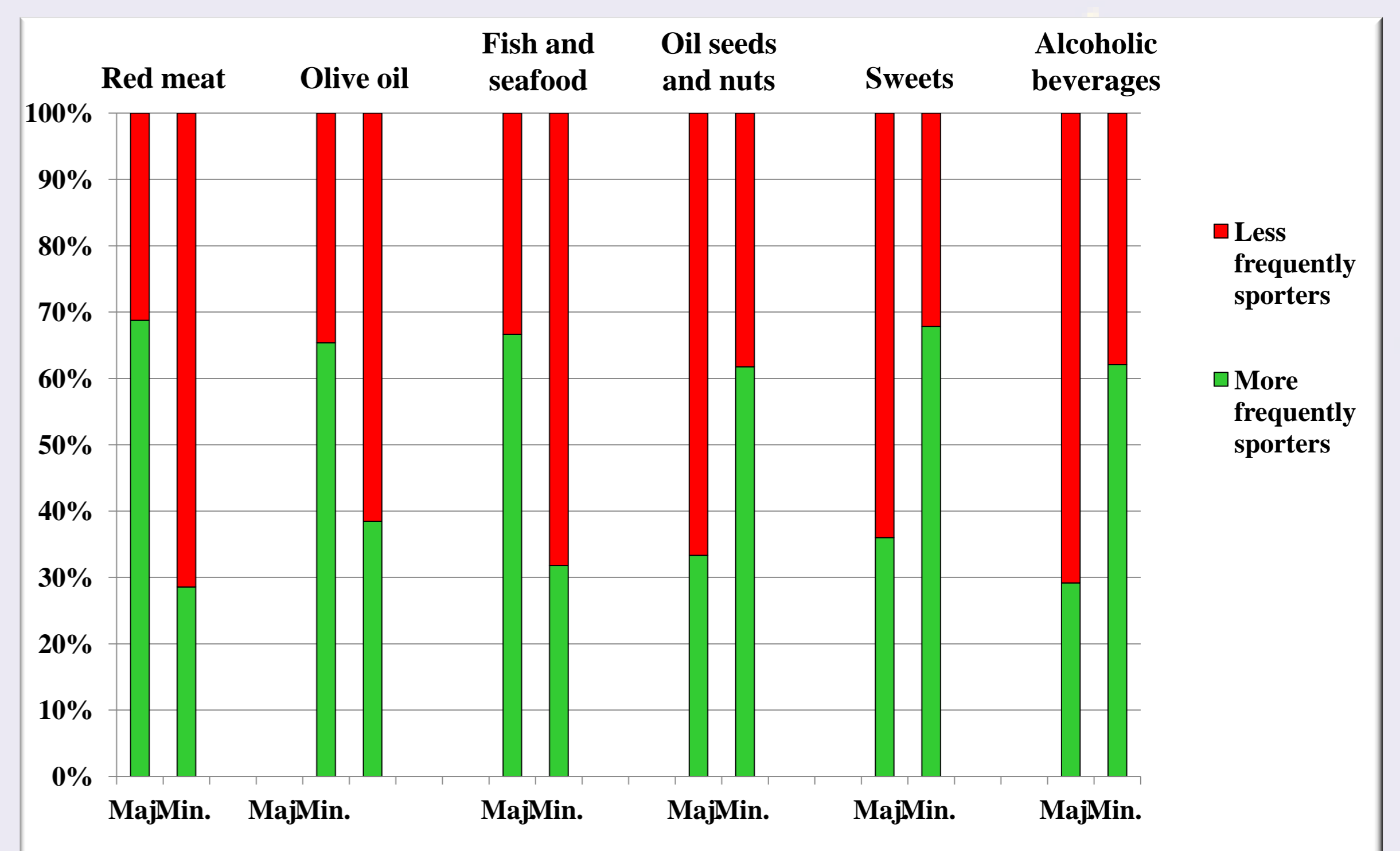
Graph 2: Significant results of the FFQ according to genders (n=53) (Potatoes: p=0,009; Energy drinks: p=0,020; Cereal: p=0,023; Olive oil: p=0,025; Sodas: p=0,001)

24 male and 29 female students took part in our research from 13 different countries, 6 faculties. The mean of their age was  $21,87 \pm 1,52$  years. The mean of the BMI was  $21,85 \pm 2,09$  kg/m<sup>2</sup>. Pursuant to BMI classification males had significantly higher BMI (Graph 1). 35 participants smoke. The weekly frequency of vegetable consumption is 4,04 (males: 3,79; females: 4,25). The weekly frequency of fruit consumption is 5,04 (males: 5,19; females: 4,91). The mean value of the meals is  $3,53 \pm 1,07$ . Males consume potatoes and energy drinks significantly more often and they consume cereal, olive oil and sodas significantly less often than females as shows Graph 2. More frequently sporters consume red meat, olive oil, fish and seafood significantly more often and they consume oil seed and nuts, sweets and alcoholic beverages significantly less often than less frequently sporters (Graph 3). 10 students study at the Faculty of Health Science but there are no significant differences between them and the other students according to the eating habits and the health behaviour.

## 2. Methods

For our cross-sectioned study the data was obtained from an online survey. 53 of the 89 students who started their studies in the second semester at the academic year of 2013/2014 completed the questionnaire. The questionnaire contains questions about anthropometric data (weight, height), the health related behaviour (smoking-, sporting habits) eating habits (eating times) and a food frequency questionnaire<sup>3</sup> (FFQ). We calculated the weekly frequency of consumption for each food group according to the study of Vereecken's and his co-workers.<sup>4</sup> For the statistical analyses we divided the variables into half. For FFQ's questions we defined the two groups as major consumers (Maj.) and minor consumers (Min.). We used the BMI classification pursuant to WHO's system.<sup>5</sup>

We accomplished the statistical analyses with SPSS version 22.0. We used descriptive statistics, Chi-square-test with Fisher's exact test, Pearson's correlation and t-test to analyse the data.



Graph 3: Significant results of the FFQ according to sporting behaviours (n=53) (Red meat: p=0,005; Olive oil: p=0,047; Fish and seafood: p=0,013; Oil seeds and nuts: p=0,048; Sweets: p=0,020; Alcoholic beverages: p=0,017)

## 4. Conclusion and Discussion

Our results show that the nutritional status of foreign students at Instituto Politécnico de Bragança is considered to be normal.

According to our results those people who did sports more frequently were eating in a healthier way, but we didn't observe any outstanding differences between genders.

Compared to the Portuguese students' consumption values in Vereecken's and his co-workers study<sup>4</sup> the fruit and vegetable consumption is higher in our sample. The recommendation of WHO is to consume fruits and vegetables 5 times a day<sup>6</sup>. We observed that foreign students ate significantly less often (p<0,05) than this guideline.

### References

- <sup>1</sup>Papadaki A., Scott J.A.: The impact on eating habits of temporary translocation from a Mediterranean to a Northern European environment, *European Journal of Clinical Nutrition*, 56 (5): 455-462, 2002.
- <sup>2</sup>Lefkothea-Stella K., Papadaki A., Hondros G., Kapsokefalou M., Scott J.: Differentiating between the effect of rapid dietary acculturation and the effect of living away from home for the first time, on the diets of Greek students studying in Glasgow, *Appetite*, 50 (2-3): 455-463, 2008.
- <sup>3</sup>Gibson R.S.: Nutritional Assessment. A Laboratory Manual. Oxford University Press New York; p. 5-103, 1993.
- <sup>4</sup>Vereecken A., De Henauw S., Maes L.: Adolescents' food habits: results of the Health Behaviour in School-aged Children survey, *British Journal of Nutrition*, 2005, (94): 423-431, 2005.
- <sup>5</sup>World Health Organization: 2014 Global Database on Body Mass Index, BMI classification apps.who.int/bmi/index.jsp?introPage=intro\_3.html
- <sup>6</sup>Diet, nutrition and the prevention of chronic diseases. Report of a Joint WHO/FAO Expert Consultation Geneva, World Health Organization, 2003 (WHO Technical Report Series, No. 916).