



# Sleep and diet quality in adolescents

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## Introduction

Sleep and rest are the basic biological rhythm of the human species and are essential for health and good quality of life, with special significance in children and young people <sup>(1)</sup>. Sleep influences on eating habits and consequently on the energy balance and body weight regulation <sup>(2,3)</sup>. Inability to sleep increases the vulnerability of overeating in particular high calorie density foods considering the current obesogenic environment <sup>(2,4,5,6)</sup>. This study aimed to evaluate the quality of sleep of adolescents in the county of Bragança and its association with diet quality.

## Methods

The study used non-experimental, analytical and transversal methodology, of epidemiological character and with a quantitative approach. It was carry out the study in a population of 345 high school students. The data was collected in May 2017 through a questionnaire that included the Pittsburgh Sleep Quality Index (PSQI), validated for the Portuguese population by Ramalho (2008) and a self-report questionnaire about food habits in adolescents.

## Results

Throughout the study and following PSQI analysis, it was concluded that 39.71% (n=137) of participants showed poor quality of sleep (PSQI >5 points). The correlation between **sleep quality and diet quality** was assessed and a statistically significant association was found between the **quality of sleep** and the **intake of snacks, sugary products, fast-food and ready meals**.

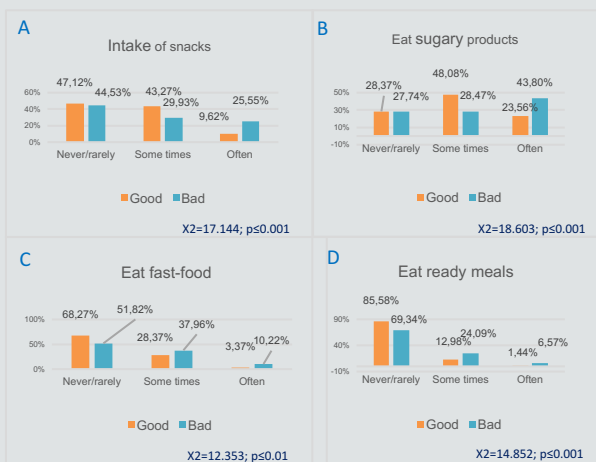


Fig. 1. The correlation between sleep quality and intake of snacks, eat sugary products, eat fast-food, eat ready meals (graphics A, B, C, D).

The risk of suffering from **poor sleep quality is higher** in young populations who **frequently eat snacks** ([OR]: 2.811; 99%), **sugary products** ([OR]: 1.901; 95%), **fast-food** ([OR]: 4.000; 99%) and **ready meals** ([OR]: 5.621; 95%) in comparison with young populations who rarely eat this sort of food.

## Conclusions

Through the analysis of the results, the **correlation between sleep quality and dietary quality is evident**. The risk of having poor quality of sleep is higher in students who frequently eat a high calorie diet and also in students who have fewer healthy eating habits.

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The sleep quality is also significantly related to the number of correct eating habits (test t = 4.857, p<0.001). **Adolescents with good sleep quality presented a greater number of correct eating habits** (mean: 7.85) compared to students with poor sleep quality (mean: 6.55).

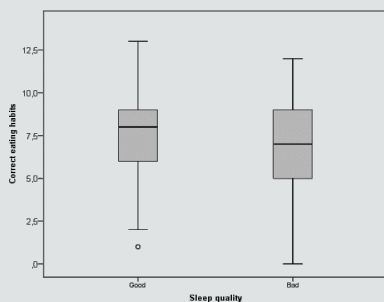


Fig. 2. Distribution of correct eating habits according to good and poor sleep quality.

In Fig. 2, it is found that the concentration of records between the 1st and 3rd quartile is higher in students with good sleep quality face students with poor sleep.