

29481

CIRCADIAN PREFERENCE AND SCHOOL FOOD SCHEDULES: A CHRONOBIOLOGICAL APPROACH TO WEIGHT GAIN IN CHILDHOOD DEVELOPMENT

Alessandra Castro Martins, Alicia Carissimi, Fabiane Dresch, Ana Adan (Universidade de Barcelona), Monica Martoni (Universidade de Bologna), Rosa Maria Levandovski, Vincenzo Natale (Universidade de Bologna). **Orientador:** Maria Paz Loayza Hidalgo

Unidade/Serviço: Laboratório de Cronobiologia HCPA/UFRGS

Introduction: The circadian system has a role in regulating several behavioral features, like appetite, sleep wake/cycle, cognitive efficiency, and motor activity. Human behavior shows interindividual variation in temporal organization. Circadian preference can emerge by the discrepancy in sleep and daytime behavior between school days and free days. **Objective:** The aim of the present study was to evaluate the influences of the interaction between circadian preference and food schedules on body mass index (BMI) in children and adolescents. **Methods:** In this cross-sectional study, conducted from March to June 2013, the inclusion criteria were as follows: students aged 08-18 years, both sexes, residing in the city of Italian descent, Rio Grande do Sul, Brazil. In the preliminary data, 259 subjects with mean age of the 13.12 ± 2.94 years (58% female) were included. The participants completed the Brazilian version of the La mia giornata questionnaire, which participants are requested to indicate their own eating habits, life rhythms, and physical self-efficacy, and completed the Brazilian Portuguese adaptation of the Morningness–Eveningness Questionnaire, which is a 19-item to estimate phase preferences in circadian rhythms. The study was conducted according to international ethical standards protocols (ethics approval number: 12–0386 GPPG/HCPA). **Results:** Among 259 subjects included, 34 subjects (13.1%) were classified as evening, 59 (22.8%) as morning, and 166 (64.1%) as intermediate type. In bivariate correlations, the evening type demonstrated the highest significant difference in hours of the breakfast for weekend to schools-days ($P < 0.01$). The subjects that presented lowest statistically differences in phase of breakfast ($P = 0.004$) and lunch ($P = 0.035$) demonstrated increase in the physical self-efficacy. However, the increase of weight was correlated to worst physical self-efficacy ($P < 0.01$). **Conclusion:** During the development can be perceived the influence of breaking rhythmicity caused by social obligations, which results in consequences on behavior, reflected in weight gain and the negative perception of self-efficacy.