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The student academic performance in Anatomy is related to Circadian Typology?

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In human species, circadian rhythmic expression differs among individuals and may be classified with the concept of Circadian Typology (CT), which consists of three chronotypes: i) Morning-type (M-types), subjects that go to bed early and wake up early and achieve their peak of mental and physical performance in the early part of the day; ii) Evening-type (E-types), subjects that go to bed and wake up late, and perform at their best toward the end of the day, during evening hours; iii) Neither-type (N-types), subjects that show intermediate characteristics between the previous samples.

Circadian preferences may change during the life span and can influence academic and sport performance and job activities [1].

We collected data considering 427 students, 294 males and 133 females (age 18-25 years), attending the School of Sport Science, University of Milan. All participants compiled the Morningness-Eveningness Questionnaire (MEQ) for the assessment of chronotype; subsequently they have been evaluated taking into consideration their anatomy test marks. The chronotype distribution of the students was: 44 M-types, 280 N-types and 103 E-types. For M-types, the result in Anatomy exam was significantly higher compared to Evening-types ($p < .01$). Even the comparison between M-types and N-types showed a significant difference ($p < .01$). Instead, the performance for E- and N-types was similar.

The present results provide a clear indication of a better academic performance for M-types students compared to E-types referring to Anatomy exam. In this way, the italian academic organization seems to be less favorable for E-types.

Reference

[1] Enright and Refinetti (2017) Chronotype, class times, and academic achievement of university students. Chronobiol Int 34 (4): 445-450.

Keywords
Chronotype, MEQ, academic performance, anatomy test marks, university students