Abstract:
The individual setup of circadian rhythm is known as a chronotype, circadian preference, or morning and evening orientation. The beginning of lessons for pupils is situated in the morning hours which is not necessarily compatible with their chronotype. The achievement of testing pupils and learning opportunities is influenced by their daily preference. The aim of this study was to describe a chronotype of pupils in the 5th grade of a primary school and its influence on achievement. We determined a chronotype of children by the questionnaire CCTQ and then, children were tested for their knowledge alternately early in the morning (7:30–9:30) and later in the morning (10:00–12:00). The research was conducted at selected primary schools in Prague and in the Vysocina Region. In total the sample included 175 pupils, 11 % are morning, 57 % intermediate and 32 % evening types. In the Vysocina Region, pupils tend to have a morning preference rather than pupils in Prague. The gender-dependent chronotype was not detected. The correlation between the chronotype and the average school marks in Czech language and Mathematics was not significant. Despite the insignificant results of statistical tests, the positive connection between the chronotype and the time of testing pupils' knowledge can be read from the obtained data: evening types have worse marks between 7:30–9:30 than at later times 10:00–12:00. However, evening types in our sample do not show risk features of the group endangered by school failure. The midpoint of sleep for the total sample is one hour shifted between school and free days. Pupils sleep approximately 45 minutes longer at the weekend. Our opinion is that the school should ensure a particular subject to be included in the timetable in different time. Our results show the influence of the residence on the circadian setting of the child.

Key words: chronotype, circadian preferences, academic achievement, primary school, school marks