Histamine N-methyltransferase is important for the normal sleep-wake cycles and aggression through the regulation of brain histamine concentration. Fumito Naganuma1,2, Takeo Yoshikawa2, Tadaho Nakamura1,2

Methods: We analyze the data obtained from a total of 2910 students who undertook the Temperament and Character Inventory (TCI) and the Composite Scale of Morningness-Eveningness (CSM). According to the CSM score, the circadian types were classified as the morning type (MT), neither type (NT), and the evening type (ET); four of temperament and three of character types of TCI scores were compared accordingly. We also conducted a correlation analysis between CSM scores and the TCI dimension, as well as a multiple regression analysis.

Results: When comparing the TCI dimension according to the circadian types after correcting for age and gender, the ET presented higher levels of novelty seeking (NS, F=25.5, p<0.001) and harm avoidance (HA, F=58.112, p<0.001), whilst the MT presented a high level of persistence (PS, F=656, p<0.001), self-directedness (SD, 98.559, p<0.001) and cooperativeness (CO, F=32.538, p<0.001). There were no significant inter-group differences regarding RD and self-transcendence (ST). From the results of the correlation analysis, if the subjects were more morningness, they presented higher values of NS and HA but lower values of PS, SD, CO and ST. From the multiple regression analysis with corrections for age and gender, it was presented that PS, NS, HA and ST had significant effects on CSM scores (adjusted R2=0.146, df=6, p<0.001).

Conclusion: It was determined that the MT was associated with a high level of PS, whereas the ET was associated with high levels of NS and HA.

Key Words: Morningness–eveningness, Circadian typology, Chronotype, Temperament, Character