Abstract BACKGROUND:

Considerable evidence suggests that variation of the serotonin-transporter-linked promoter region (5-HTTLPR) is associated with anxiety-related traits. Academic outcomes are also more closely related to trait anxiety. This preliminary study aimed to explore the association between academic performance and levels of anxiety with respect to the bi- and triallelic classification of 5-HTTLPR polymorphism of the 5-HTT gene in teacher candidates.

METHODS:

In our study, Spielberger's State-Trait Anxiety Inventory, the Selection Examination for Professional Posts in Public Organizations (KPSS) and 5-HTTLPR genotypes were used to investigate a group of 94 healthy teacher candidates.

RESULTS:

Higher anxiety scores were significantly associated with the S'S' genotype. There was no direct, statistically significant association between academic performance and genotypic groups regarding bi- and triallelic classification. However, the students who have L'L' or LL genotypes had the lowest levels of trait anxiety and the poorest academic performance. Additionally, there was a significant positive correlation between academic performance and anxiety levels.

DISCUSSION:

These findings support the idea that S and L(G) alleles are associated with anxiety-related traits, and that the S'S' genotype may be a good indicator for anxiety-related traits in a sample from the Turkish population. A specific degree of anxiety is considered to be a motivation for learning and high academic performance. However, 5-HTTLPR polymorphism of the 5-HTT gene may be one of the genetic factors affecting academic performance in connection with anxiety levels. Implications for incorporating anxiety management training in the educational process in terms of both environmental and individual factors will have a very important role in improving effective strategies for student personality services, as well as for development and planning.