

# Interrelation between Anxiety Level and Aggressiveness

Liudmyla Popova, Oxana Nakonechnaya, Irina Vasylyeva  
Kharkiv National Medical University,  
Ukraine



## Background:

High anxiety is the base not only for depression development but also to impulsive aggression manifestation. We revealed the differences in neurohumoral status in animals with submissive and dominant behavioral types [1]. Hypothalamic pituitary adrenal axis hyperactivity, the increase in noradrenaline and the decrease in serotonin levels in limbicocortical regions were observed in submissive male rats (high anxiety) [1, 2].

## Aim:

Due to these results, we studied interrelation between anxiety level and aggressiveness index.

## Methods:

The study involved 100 young men aged 18 to 22 years. They were asked to answer Buss-Durkee Hostility Inventory and Spielberger State-Trait Anxiety Inventory. The anxiety level was assessed in points. The aggressiveness index was estimated in a percentage of the maximum level.

## Results:

No correlation between the anxiety level and the aggressiveness index was found in whole group. We divided whole group into three subgroups depending on anxiety level: with high, moderate and low anxiety levels. It should be noted, that the most of men had moderate anxiety level, a few men had low anxiety level.

We revealed the existence of high positive correlation ( $r=0.611$ ,  $p=0.046$ ) between anxiety level and aggression index in men with high anxiety level (Fig. 1) and negative correlation ( $r=-0.563$ ) in men with low anxiety level (Fig. 2).

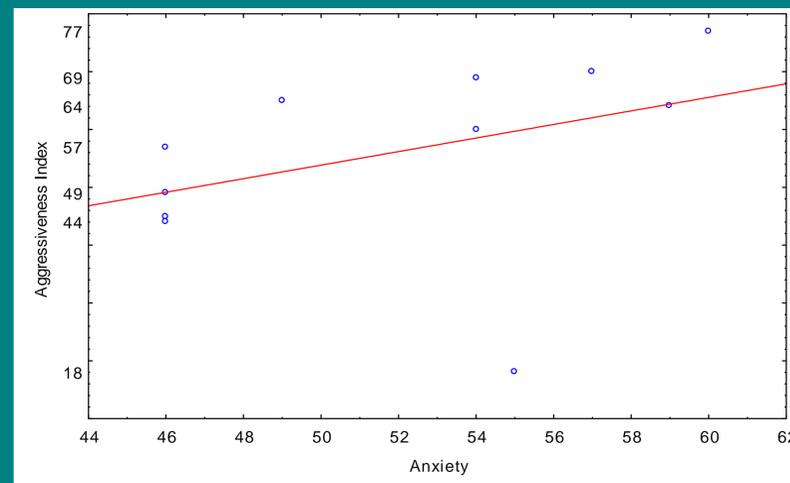


Figure 1 Correlation between aggressiveness index and anxiety in men with high anxiety level

In last subgroup correlation was statistically insignificant ( $p=0.146$ ) due to a few men with low anxiety level. But very tight inverse correlation between physical aggression, that is the component of aggressiveness index, and anxiety was revealed in this subgroup ( $r=-0.733$ ,  $p=0.038$ ). In men with moderate anxiety level no correlation between anxiety level and aggression index was observed.

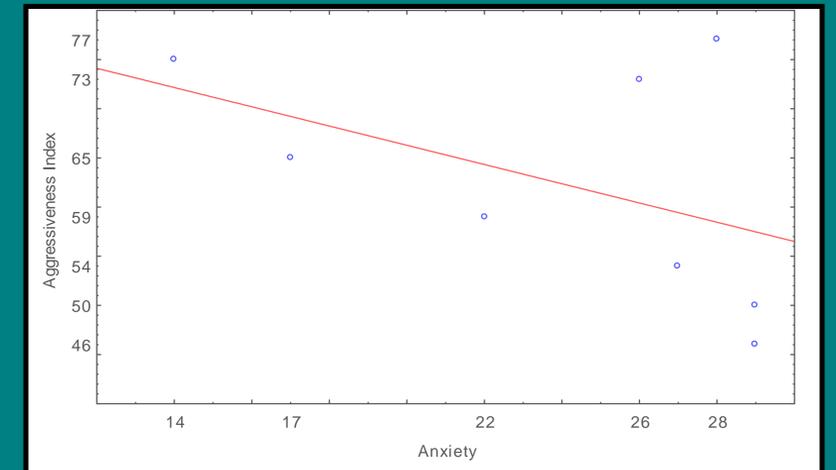


Figure 2 Correlation between aggressiveness index and anxiety in men with low anxiety level

## Conclusion:

Men with low and high levels of anxiety have the oppositely directed relationship between anxiety and aggressiveness index. This interrelation may be taken into account in anxiety treatment and in the prevention of impulsive aggression manifestation.

## References:

1. Popova L., Vasylyeva I. Neurohumoral Status and Aggression. LAMBERT Academic Publishing, 2014. – 80p.
2. Popova LD, Vasil`yeva IM. Roles of Central Monoaminergic Systems in the Formation of Different Types of Aggressiveness in Rats. Neurophysiology. 2014;46(3):263-6. <http://link.springer.com/article/10.1007%2Fs11062-014-9438-1>.

## Contact information:

Email: [popova\\_ld@ukr.net](mailto:popova_ld@ukr.net)