

The aim of the project is to analyze basis of behavior known as grooming occurring in mammals, including laboratory rats. This behavior involves the animal performing complex sequences of movements such as, among others: rubbing, licking and scratching of hair and skin, using front and hind limbs. Although this behavior resembles hygienic procedures performed by animals, the context of its occurrence as well as its intensity and duration suggest that it may also fulfill other functions.

It was also observed that intense grooming occurs in stressful situations (eg. in unfamiliar environment). It can therefore be assumed that grooming contributes to the reduction of emotional tension experienced by the animal in a stressful situation. On the basis of such an assumption in behavioral studies grooming is often regarded as an indicator of distress experienced by an animal, and its duration and intensity are used to assess the level of emotional tension. However, due to the ambiguous role of grooming, it is unclear whether grooming should be interpreted as an indicator of anxiety and stress in laboratory animals subjected to various research procedures during experiments.

A widely used tool for testing emotional reactions manifested by an animal is The Open Field Test. Analysis of the intensity and duration of grooming in relation to other behaviors typical for staying in a new environment (such as exploration, thigmotaxis, locomotor activity etc.) will allow to assess the context of the occurrence of the behavior under study. On the other hand, the comparison of the examined variable with other traditionally used measures of emotional tension (such as freezing, defecation, and urination) will bring us closer to assessing the accuracy of using this indicator in behavioral studies.

Rodents are the animals most often used in studies using an animal model. Rats and mice account for 80% of all animals used in research in the European Union. For research purposes, rats are bred from the late 1800s. They also play an important role in psychological, neuropsychological and psychophysiological research. The conclusions drawn from animal studies are often generalized to other species, including humans. Taking that into account, the understanding of the functions of the frequently used in behavioral research variable is of key importance. In addition, in-depth knowledge of the functions of animal behavior is of particular importance at a time when an increasingly important role is attached to ensuring the welfare of animals used by humans, including laboratory animals.

Given that grooming is one of the basic behaviors occurring in rats, finding an answer to the question about its various functions seems to be extremely significant. If the hypothesis about a relation between grooming and emotional states is confirmed, observation of this behavior will become a simple tool for quick assessment of distress and emotional disorders in animals in captivity.