

Review of: "Novel Method to Assess Group Dynamics in Rats Reveals Deficits in Behavioral Contagion in KM Rats"

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Potential competing interests: No potential competing interests to declare.

This paper presents a new approach for automatically assessing "*behavioral contagion*" in rats using the IntelliCage system. This is a pilot study conducted in male KM and Wistar rats.

My major concern is that the KM rat model is considered a "*new model for autism spectrum disorder*" (ASD). I found only two publications, both from the same group, suggesting that KM rats exhibit some social deficits. Are there any validation studies for this new model, considering the three types of model validity (i.e.

<https://pmc.ncbi.nlm.nih.gov/articles/PMC3384226/>)?

The title of this paper is "*Group Aspects of Behavioral Contagion*". I would like to ask for clarification on the concept of "group aspect" in the current context. It seems that group aspects could be a novel approach that requires further explanation and illustration.

The experiment requires more detailed information.

According to the Results, the water-deprived demonstrator rat was returned to the IntelliCage at 12:00. The light was turned on at 8:00 a.m., indicating that the behavioral contagion analysis was begun in the middle of the light phase. The timing of the experiment is an important consideration because rats are nocturnal animals, and their natural drinking behavior differs during dark and light periods. Was anxiety tested in the present experiment? KM rats are known to exhibit a higher level of anxiety compared to control strains. I suggest that KM rats showed a lower behavioral contagion only in light conditions, when they had a higher level of anxiety. In the dark period, behavioral contagion in KM rats might not differ from control. Do the authors consider the possibility that a low behavioral contagion in KM is a result of higher anxiety levels?

Another issue is the duration of "behavioral copying." How long did the period of behavioral contagion last in the group of rats? The method says: "It lasted for at least 4 hours". The results section says: "*Since the behavioral contagion was assessed within a 30-minute interval, the baseline data, collected for three hours, was divided into 6.*" The last statement is unclear to me. Please clarify. I expect certain dynamics of a copying strategy to emerge, as well as individual profiles of this strategy. However, the number of KM rats is too low to adequately address these issues.

"*in groups of normotypic and autistic phenotype rats*" How was the autistic phenotype assessed in the current experiment?

"*The animals arrived at the animal chapter of IHNA at the age of 6-8 weeks.*" What were the breeding sources of KM rats

and Wistar rats? Please clarify.

I agree with the previous reviewer that Figure 2 needs revision. It is entitled "*Behavioral contagion in Wistar and KM rats*," and it is supposed to demonstrate inter-strain differences. However, the size of the letters and numbers in Figure 2 is too small. In order to better understand the study's findings, I kindly ask the authors to provide more detailed explanations and visual representations of their statistical results.