**Supplementary Figure 1**

In order to analyse the levels of anxiety of the females of experiment 1 during the MPRT, we analysed two variables that are usually reduced by anxiety in the classical Open field test [1], namely locomotion and time in the centre of the cage. Through the MPRT, animals become habituated to the test conditions and anxiety gradually declines. Therefore, we restricted our analysis to the first 5 minutes of the first session of the MPRT.

To evaluate locomotion, we used the open source software for behavioural analysis BORIS (<https://www.boris.unito.it/>, [2]). With this software we traced three evenly spaced lines onto the videos, parallel to the long axis of the cage of the females, and a person blind to the experimental conditions measured the number of line crossings in the first five minutes of the test for all the females (dams, LTC, STC and pup-naïve virgins). Upper figure shows a bar histogram (mean±SEM) of the results with the individual data. Differences among females were explored using a non-parametric Kruskal-Wallis test for independent samples, as data showed no homoscedasticity. The results indicate no statistically significant differences between females (p=0.108).

We also used BORIS to trace a square occupying the centre of the home cage, and the same person measured the time that females spent in this central area of the cage. Data (mean±SEM) for the females of all four groups are shown in lower figure. Since data fulfilled both normality and homoscedasticity, we analysed possible differences with a one way parametric ANOVA. The results, however, revealed no significant differences between females (F3,33=2.324, p=0.091).

This analysis suggest that anxiety is similar in all four groups of females, so that differences in pup retrieval latency and other variables cannot be attributed to anxiety but to differential motivation of the females to climb the barrier and retrieve the pups.

1 Crawley J, Bailey K. Anxiety-Related Behaviors in Mice. In: Buccafusco JJ, editor. Methods of Behavour Analysis in Neuroscience. , Second. Boca Raton (FL): CRC Press/Taylor & Francis; 2008; pp 77–101.

2 Friard O, Gamba M. BORIS: a free, versatile open-source event-logging software for video/audio coding and live observations. Methods Ecol Evol. 2016;7(11):1325–30.