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Conductas prosociales a ratonas embarazadas estresadas atenúan déficits cognitivos y de sociabilidad en sus crías.

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CONDUCTAS PROSOCIALES A RATONAS EMBARAZADAS ESTRESADAS ATENÚAN DÉFICITS COGNITIVOS Y DE SOCIABILIDAD EN SUS CRÍAS

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RESUMEN

Las acciones prosociales hacia mujeres embarazadas estresadas podrían beneficiar el bienestar de la madre, y el desarrollo físico y mental de su descendencia. Se puso a prueba esta hipótesis exponiendo a ratonas embarazadas entre los días 2 y 12 gestacionales a estresores impredecibles, y luego se las alojó o no se las alojó con una hembra no embarazada de la misma familia hasta el final del embarazo. Se generó un tercer grupo no expuesto al estrés. Las crías fueron evaluadas conductualmente. La memoria de reconocimiento reveló un efecto significativo en hembras (p= 0.0017) y una tendencia en machos (p= 0.0652), con un mejor desempeño de los dos primeros grupos. Luego, se analizó la interacción social. Se vieron diferencias entre grupos en hembras (p= 0.0543) y machos (p= 0.0208). Hubo una recuperación de la interacción social en el grupo experimental en las crías de ambos sexos. Sorprendentemente, el grupo estresado mostró mayor preferencia por la novedad social en comparación con el grupo experimental en machos (p= 0.0045), pero no en las hembras (p= 0.1105). Estos resultados corroboran que las conductas prosociales mitigan los efectos negativos del estrés.

Palabras clave

Conducta prosocial - Estrés - Expresión genética - Cognición emoción

ABSTRACT

PROSOCIAL BEHAVIORS ON STRESSED PREGNANT MICE ATTENUATE COGNITIVE AND SOCIABILITY DEFICITS OF MALE AND FEMALE OFFSPRING

Prosocial actions toward stressed pregnant women could benefit maternal well-being and support the physical and mental development of their offspring. This hypothesis was tested by exposing pregnant mice to unpredictable stressors between gestational days 2 and 12. Then, they were either housed or not housed with a non-pregnant familiar female until the end of pregnancy. A third group was not exposed to stress. The offspring were behaviorally assessed. Recognition memory revealed a significant effect in females (p= 0.0017) and a trend in males (p= 0.0652), with better performance in the two former groups. Social interaction was then evaluated. Differences between groups were observed in females (p= 0.0543) and males (p= 0.0208). Social behavior was recovered in the experimental group across both sexes. Surprisingly, the stressed group showed greater preference for social novelty compared to the experimental group in males (p= 0.0045), but not in females (p= 0.1105). These results support the idea that prosocial behavior mitigates the negative effects of prenatal stress.

Keywords

Prosocial behavior - Stress - Gene expression - Cognitive emotional

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