Opposing Oxytocin Effects on Intergroup Cooperative Behavior in Intuitive and Reflective Minds

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[1]L I . B D . , J H _ _ S . M , B , MD, SA; [2]D . P _ _ P _ _ B _ , C ; [3]PK -IDG/M G I . B R , P _ _ B _ , C ; [4]D . P _ _

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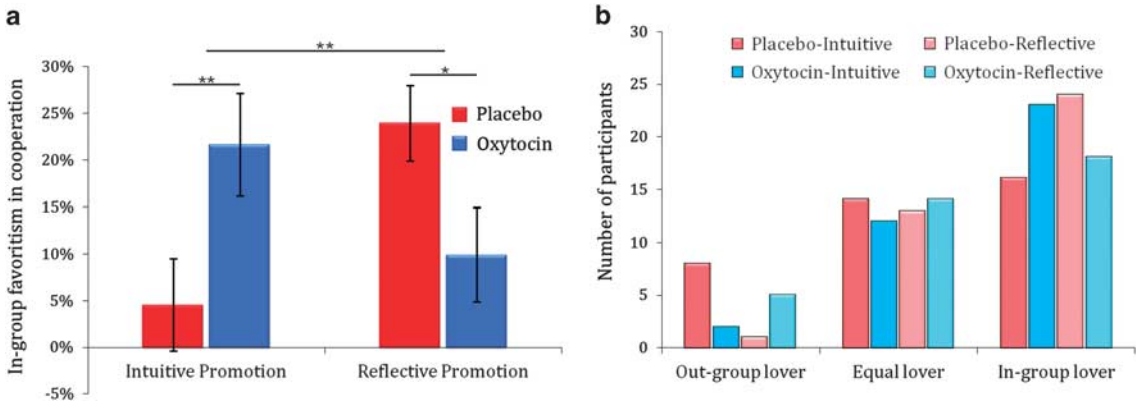

Figure 1 Distinct oxytocin effects on ingroup favoritism when intuition or reflection was promoted. (a) Oxytocin administration significantly enhanced ingroup favoritism when intuition was encouraged, whereas oxytocin significantly decreased ingroup favoritism when reflection was favored. (b) Distribution of outgroup-favored, equal, and ingroup-favored players. The distribution of ingroup-favored players and outgroup-favored players differed significantly across the four conditions. Oxytocin increased the number of ingroup-favored players among the individuals who were primed with intuition, whereas oxytocin decreased the number of ingroup-favored players among those who were primed with reflection.

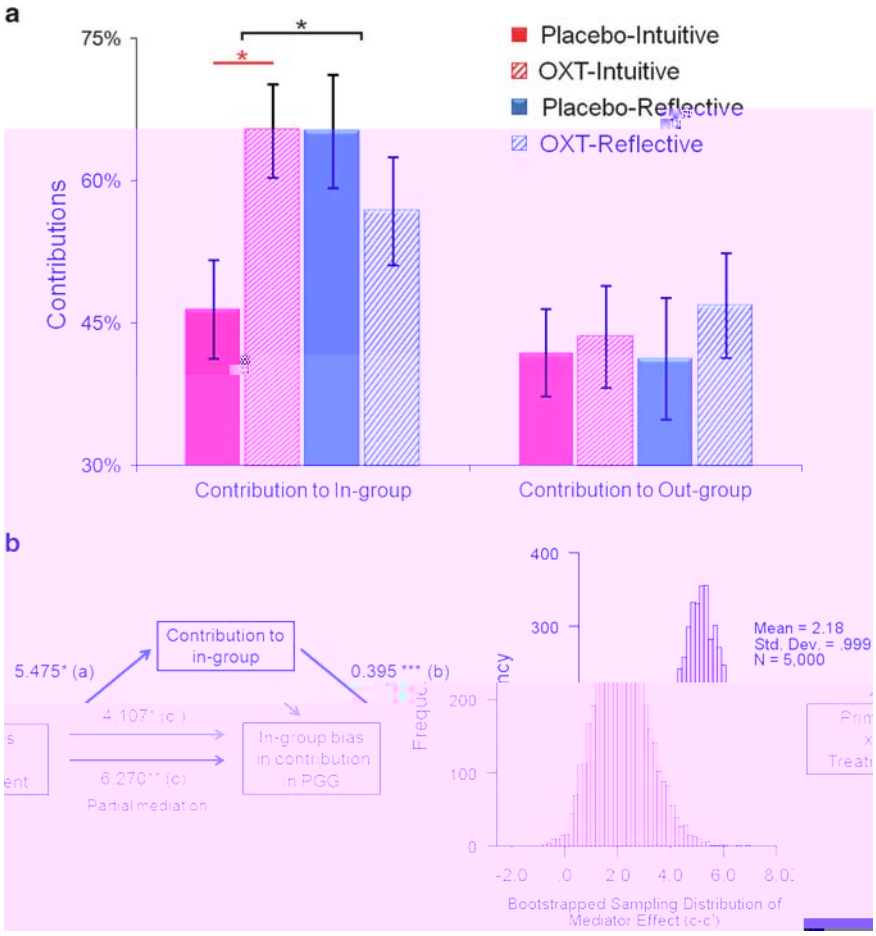

Figure 2 Effects on ingroup facilitation outgroup deterioration. (a) Oxytocin increased contribution to ingroup members when intuition was encouraged, but decreased ingroup cooperation when reflection was favored. However, there was no significant Treatment × Priming interaction when playing with outgroup members. (b) The Treatment × Priming interaction on ingroup favoritism was mediated by its effect on contribution amount to ingroup members. The bootstrapped sampling distribution of mediator effect was provided on the right panel.

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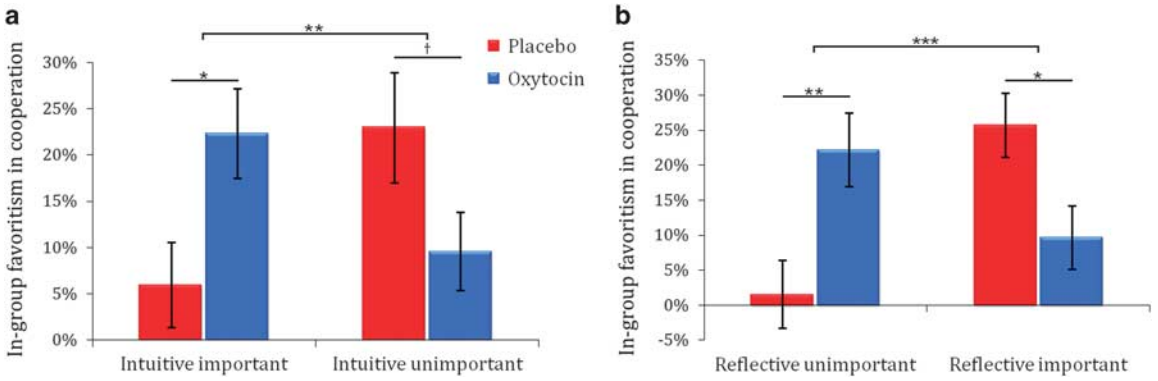

Figure 3 Influence of intuition reflection importance in daily life on ingroup favoritism during PGGs. Oxytocin administration increased ingroup favoritism on the contribution during PGG in individuals who thought intuition-important (a) or reflection-unimportant (b) in daily-life decision-making. However, oxytocin administration reduced ingroup favoritism during PGG in those who thought intuition-unimportant (a) or valued reflection-important (b) in daily-life decision-making. $P<0.07$; * <0.05; ** <0.01; *** <0.001.

16 ‘u u - L ’ (u u u). 53 u u u u u u u . u ‘ u - L ’, ‘u u - L ’, u ($\chi^2=9.543$, C ’ $V=0.314$ ($n=97$), $p=0.023$). C ’ V u u -/u u - L z , u u - L L u u ’ vs ‘u u - L ’: : 16 *vs* 8; : 24 *vs* 1), u u - L (: 23 *vs* 2; : 18 *vs* 5; F u 1).

Treatment × Priming Interaction on Contributions to Ingroup *vs* Outgroup Members

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Intuitive *vs* Reflective Cognitive Styles in Daily Life

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(F(1,144) = 81.867, $p < 0.001$, $\eta^2 = 0.362$). … ($p > 0.05$; …).

DISCUSSION

… (D … 2012; … 2012). … (*vs* …) … *decreased* … *vs* … (*vs* …) … 5) … GG. … 2, … 6 … 3, … 7 …

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