

Chimps with higher-ranking moms do better in fights

January 28 2015



Image: Wikipedia.

For chimpanzees, just like humans, teasing, taunting and bullying are familiar parts of playground politics. An analysis of 12 years of observations of playground fights between young chimpanzees in East Africa finds that chimps with higher-ranked moms are more likely to win.

The results come from an analysis of daily field notes recorded from 2000 to 2011 at Gombe National Park in western Tanzania. Stored in the

Jane Goodall Institute Research Center at Duke University and also at The George Washington University, the records are part of a larger database containing more than 50 years of data on over 300 wild [chimpanzees](#), going all the way back to Jane Goodall's first observations from the early 1960s.

"We wanted to find out what role [moms](#) play in helping young chimpanzees establish dominance within their groups," said lead author Catherine Markham, an assistant professor at Stony Brook University.

During the time of their study, chimps under 12 engaged in nearly 140 fights, mostly between non-siblings.

The researchers determined the winner of each fight based on which chimp did most of the hitting, kicking, biting or chasing, and which one squealed, cried or ran away.

When they analyzed the effect of parental pecking order, the chimps with higher-ranking mothers were more likely to win.

But contrary to the overprotective, helicopter parent model, higher-ranking moms were no more meddlesome than lower-ranking moms, the researchers found.

"In other primate species you see moms swooping in to intervene and help their offspring," said co-author Carson Murray, an assistant professor at George Washington University.

But the chimp moms intervened in only 10 of 137 cases. Ninety percent of the time the moms let their offspring fight their battles for themselves.

It may be that the mere threat of a "bodyguard" nearby is enough, since

young chimpanzees are rarely out of their mothers' sight, Markham said.

"Or it may be that offspring of higher-ranking moms are bigger or stronger for their age, either because they and their moms had priority access to food or because the same genetics that made their moms high-ranking give them a competitive advantage, too," she said.

The researchers' next step will be to compare the outcome of fights when mom is nearby to fights when mom is further away.

"It could be that chimps are more bold or confident or their opponents are more scared when the moms are close," Murray said.

The results could help explain why the offspring of higher-ranking chimpanzee females are more likely to survive—a pattern first reported in the late 1990s in a landmark study by co-author Anne Pusey, chair of evolutionary anthropology at Duke.

The study appears online in the February issue of the journal *Animal Behaviour*.

More information: "Maternal rank influences the outcome of aggressive interactions between immature chimpanzees," Markham, A.C., E. Lonsdorf et al. *Animal Behaviour*, Feb. 2015. [DOI: 10.1016/j.anbehav.2014.12.003](https://doi.org/10.1016/j.anbehav.2014.12.003)

Provided by Duke University

Citation: Chimps with higher-ranking moms do better in fights (2015, January 28) retrieved 22 May 2024 from <https://phys.org/news/2015-01-chimps-higher-ranking-moms.html>

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