

STRESS AND MATERNAL BEHAVIOR IN WILD CHIMPANZEES AT GOMBE NATIONAL PARK, TANZANIA

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The mother-infant relationship is critical to offspring survival and reproductive success in most altricial mammals. Stress has been shown to influence maternal behavior in numerous species, although studies on great apes are limited. Nonetheless, they are interesting study species given their slow developmental period and pronounced mother-infant attachment through an extended period of dependency, not unlike humans. Previous work by our group determined that chimpanzee (*Pan troglodytes schweinfurthii*) mothers with dependent offspring have higher adrenocortical (stress) values than females without dependents ($F_{2,81} = 3.18$, $p = 0.05$). Here, we report the preliminary results from a 5-month study on how adrenocortical activity influences maternal behavior among the wild chimpanzees of Gombe National Park, Tanzania. We collected detailed data on mother-offspring interactions ($N = 7$ mothers, $N = 105$ full-day follows); these data include grooming, play, proximity, and nursing for the mother-infant dyad. We non-invasively collected fecal samples ($N = 104$ samples) in order to quantify female adrenocortical activity through a method that has been previously validated in our laboratory for this species. From these data, we tested for a relationship between fecal cortisol metabolites and maternal behavior. This is the first study to examine the relationship between stress and maternal behavior in wild chimpanzees, and we expect that the results will provide insight into the same topic in humans.

Keywords: chimpanzees, maternal behavior, Gombe National Park, stress