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SOCIALITY AND FEMALE REPRODUCTIVE SUCCESS OF OLIVE BABOONS IN GASHAKA GUMTI NATIONAL PARK, NIGERIA

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Several primate studies have found that female reproductive success is linked to both the quantity and quality of their social relationships. For example, female reproductive success in savannah baboons has been shown to vary with social status and group size, with subordinate females in larger groups suffering decreased reproductive success. Other studies show that females with larger numbers of matrilineal kin and/or those who spend more time in social interaction may benefit from this increased social support by having greater reproductive success. Here we use data from a nine-year study of wild forest-living olive baboons to investigate whether sociality is linked to female reproductive success, as measured by both birth rate and infant survival rates. These animals differ from many other baboon populations in that they live in relatively small social groups (mean size=23) and female rank relationships are not always clear. Grooming rates of females do not predict their birth rate or infant survival rates, this being the case whether all grooming, grooming received or grooming given are used. We also analysed the social networks of these animals for two social behaviours - grooming and aggression. We found that females' network centrality for grooming had a significant positive correlation with infant survival rates but not birth rate. Conversely, infant survival rates (but not birth rate) were negatively correlated with network centrality for aggression. This indicates that an individual's position in a social network may have important reproductive consequences in this population.

Keywords: sociality, baboon, reproductive success