

FACTORS INFLUENCING NUMBER OF SEXUAL CYCLES IN THE GOMBE CHIMPANZEESA.E. Pusey*Duke University, Durham, NC, USA**Presenter's Email: anne.pusey@duke.edu*

Female chimpanzees exhibit sexual swellings during which they mate repeatedly with many males. Examination of sources of the considerable variability that females show in the number of sexual cycles before each conception and during pregnancy helps explain multiple mating. Adaptive hypotheses to explain mating during non-fertile periods include paternity confusion to reduce the risk of infanticide, or to garner male investment or support against female aggression. Multiple cycles before conception may also occur if energy balance is insufficient for ovulation or conception. Multivariate analysis of 40 years of data on the Gombe chimpanzees revealed that cycling patterns were significantly influenced by infant survival, female age, and whether the female was natal or immigrant. If the previous infant died, females resumed cycling more quickly and had fewer cycles before conceiving. Duration of post-partum amenorrhea increased with female age and did not differ by immigrant status, while waiting time between the first cycle after birth and the next conception decreased with age and was longer for immigrants than natal females. Swellings during pregnancy decreased with age and were more frequent for immigrant than natal females. These results suggest that both energetic constraints and social factors influence cycling patterns. The larger number of post-partum cycles in young immigrant females may partially reflect a lower energy balance resulting from lower feeding efficiency in an unfamiliar area. However, their greater sexual activity during pregnancy is consistent with the higher risks they face from infanticide by unfamiliar males or aggression from resident females.

Keywords: multiple mating, sexual cycles, infanticide, female aggression