

Baboons live in large hierarchical groups where females often stay in the established groups and males tend to immigrate (Nguyen et al. 2009). Thus, dominance ranking governs the success of males in these groups (Engh et al. 2006). Despite close male-female bonds, baboons are non-monogamous species (Nguyen et al. 2009). The trade-off between parental investment and mating investment is very distinctive between male and female baboons. Increased instability prompts males to put more effort into mating competition and less towards paternal care (Cheney et al. 2006). A unique sexually selected strategy that males use to increase their reproductive success is infanticide. Infanticide refers to the killing of unweaned infants by conspecific males and poses a serious threat to many non-human primates (Polombit 1999).

The absence of mating exclusivity among male and female friends suggests that males should have minimal paternal care towards infants, which questions the significance of the evolution of “friendships” (Nguyen et al. 2009; Weingrill 2000). Researchers interested in examining the adaptive significance of male-female friendships used ad-libitum and focal sampling to study affiliative and antagonistic interactions (Weingrill 2000; Nguyen et al. 2009; Huchard et al. 2013). Researchers found the main benefit of male-female relationships to be infanticide avoidance, wherein males protect mothers/infants from aggressive attacks (Nguyen et al. 2009; Weingrill 2000; Palombit 1999). These findings indicate that pair-bonds align with the infanticide-protection hypothesis (Nguyen et al. 2009; Weingrill 2000; Palombit 1999). Supplementary research on father-offspring interactions indicated that stronger relationships between juvenile baboons and fathers helped mitigate the risk of attacks from conspecifics while improving the offspring’s access to resources, thereby improving their fitness (Huchard et al. 2013).

Hormonal responses to stress are manifested as changes in glucocorticoid (GC) levels in baboons (Engh et al. 2006; Cheney et al. 2015). Researchers used focal animal sampling and general linear mixed models to investigate GC levels indicating the stress response to infanticidal behaviour (Engh et al. 2006; Cheney et al. 2015). Engh et al. (2006) studied female GC levels in response to several stressors, while Cheney et al. (2015) analyzed male GC levels in response to varying degrees of paternal effort and mating effort. Analysis of these models concluded that the threat of infanticide, male immigration, and reproductive states of females contributed significantly high GC levels in females, while unstable periods (marked by dominance rank and friendship status) resulted in high levels of GC in males (Engh et al. 2006; Cheney et al. 2015). The findings indicate that males with elevated stress levels engage in higher rates of infanticide (Cheney et al. 2015). Consequently, females express notably high GC levels when there is a direct threat to their infants that results in the risk of/occurrence of infanticide (Engh et al. 2006).

Infanticide by males is a leading cause of infant mortality in chacma baboons, thus many females have evolved reproductive and behavioural modifications to counter this threat (Clarke et al. 2009). Researchers used focal animal sampling and behavioural analyses to investigate female counterstrategies to infanticide (Clarke et al. 2009; Zinner & Deschner 2000). Zinner & Deschner (2000) observed the development of situational deceptive sexual swellings as a response to male takeovers. This allowed males to have mating opportunities without the possibility of conception, thus reducing the costs of simultaneous pregnancy and lactation for the

female (Zinner & Deschner 2000). Clarke et al. (2009) expanded on this research by studying polyandrous mating behaviour as a response to sexual conflict, wherein some females resort to polyandry to decrease paternity certainty among males and influence their mating patterns (Clarke et al. 2009). Researchers showed that both strategies countered the selective pressure of infanticide by taking on an indiscriminate mating strategy to gain protection from different males and consequently reduce the risk of infanticide (Clarke et al. 2009; Zinner & Deschner 2000). Additional research found infant strategies such as producing and maintaining conflict with males and seeking adoption from non-mothers to prevent the risk of infanticide Gomendio & Colmenares 1989). Through reviewing three studies, a gap in knowledge can be identified about other female counter strategies to infanticide, such as the adsorption of the fetus when exposed to replacement males that will likely kill the offspring at birth (Clarke et al. 2009).

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