

Behavioural pattern showing mother-infant relationship in Rhesus monkey in Jammu (J&K)

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(Received: May 13, 2009; Accepted: August 07, 2009)

ABSTRACT

The present communication deals with the behavioural pattern showing relationship of Rhesus mother with their infants. The study was conducted for a period of one year on a troop consisting of 152 individuals inhabiting the Bahu Fort area which is situated on a hillock at an altitude of 325m on the bank of River Tawi, Jammu, J&K state. The investigation reveals that the adult rhesus mother showed various motherly activities both positive (such as embrace, grooming, eye contact, approaching, looking at, extending arm and dorsal and ventral carrying) as well as negative (i.e. embrace, avoidance, punish and reject towards the infant). In addition an effort was also made to study the schedule of growth related behavioural pattern of rhesus infant.

Key words: Bahu-Fort, hillock, altitude, embrace and grooming.

INTRODUCTION

Rhesus mother and infant relationship is the most intimate and long lasting of all the relationships Rowell *et al.*¹ (1964). The infants of rhesus monkeys begin life completely dependent on their mother for survival, receiving all nourishment, physical warmth and other basic biological support from her Harlow *et al.*² (1963), Hinde and Spencer-Booth³ (1967). Rhesus mothers are usually very restrictive as they restrict the movements and social contacts of their infants from approaching or being approached by other monkeys. Several workers have reported that young infants attract group members in order to play with them Rowell *et al.*¹ (1964) Southwick *et al.*⁴ (1965), Kaufmann⁵ (1966), Mukherjee⁶ (1969) and Lindburg⁷ (1971). Infants may also be able to learn their mothers rank by observing her reactions to the approaches of other females to them when mother

and infant are in contact. The physical contact between mother and infant is influenced by the mother's feeding behaviour Jhonson⁸ (1986). Infants of high ranking mothers tend to be more attractive to other females than infants of low ranking mothers) and tend to become preferred play partners Cheney⁹ (1978). Mother rhesus macaques show differential investment in their offsprings depending upon the sex of the infant Maestriperi¹⁰ (2001).

MATERIAL AND METHODS

The interactions between the rhesus mother and the infant were studied for a period of one year from March 2005 - February 2006. Observations were made by observing the rhesus mothers and their infants for at least 4 times in every month and by visiting the temple in different months. Regular observations were made from 5:30 am in summers and from 7:00 am during winters till the

monkeys moved to their roosting sites. In addition to the regular visits, certain irregular visits were also made. Data on the different behavioural patterns was collected by observing the interactions between the rhesus mother and her infant.

RESULTS AND DISCUSSION

Rhesus mother - infant relationship was found to be the most affectionate and long lasting one during the entire study period. Just after birth, intimate association was found between the infant and mother. The intensity of their relationship has been observed by many workers Rowell *et al.*¹ (1964) and Swartz and Rosenblum¹¹ (1981). It has been further observed that the birth process plays a major role in the establishment of mother-infant bond. During the course of investigation it was found that the rhesus mother showed both positive and negative behaviour towards their infants, which is discussed below:

Positive behaviour

Embrace

Encompassing or partially encompassing the body of the infant with one or both the arms. After 3 months embracing by the mother decreased drastically.

Grooming

Discrete picking or spreading of fur by hand to remove foreign particles. Mother spent much of her time in grooming, licking, patting and making eye contact during the first few days of the infant life Swartz and Rosenblum¹¹ (1981).

Dorsal carrying of Infant

Infant cling on mothers back when mother is in locomotion. Mother starts showing dorsal carrying of infant when he is of 2 months of age. The maternal transport and locomotory development in infant of rhesus monkeys has been worked out and it is found that as the infant grows older, mother stops carrying the infants Gurerra¹² (1988).

Ventral carrying of Infant

Newly born infants start clinging to the fur of their mother on the abdominal side i.e. ventral side and continues with this practice till he is of 2-3 months old.

Support

Mother helps with hands only, pressing the infant to ventral side while carrying or suckling.

Approaching

The mother reaches towards the infant engaged in different activities by either touching or picking it up.

Looking At

The mother stares at infant when he is engaged in different activities like play, exploration etc.

Extending arm

In sitting position the mother from a particular distance extends one hand so that the infant may come to her.

The infant develops locomotory skills with age, explores the environment and starts foraging independently. Simultaneously, the mother also starts initiating independence to her infant and thus the frequencies of mother's positive behaviour decreases gradually with the age of the infant.

Negative Behaviour

Reject

Termination or active avoidance of physical contact.

Punish

Hair and tail pulling, biting and threatening.

Avoidance

Mother does not pay any attention to the infant when he tries to make contact with her.

Schedule of growth related behaviour pattern of rhesus infant

1st Week

Infants spend their first month life in physical contact with their mother. As a result they remain clinched to the fur of mother on the abdominal side i.e. ventral side. Infant spends virtually all of their first month of life in physical contact with their mothers. During this time a strong and affectionate social bond inevitably develops between mother and her infant. It has been further

observed that clinging is strong at the time of birth in many species of macaques but some mothers have been seen supporting their infants for the first few days Hinde *et al.*¹³ (1964), Bertrand¹⁴ (1969) and Ransom and Rowell¹⁵ (1972).

2nd Week

Infant leaves its mother for short duration but mother keeps a constant vigil on it.

3rd Week

Infants are able to travel up to 3-4 meter distance for short durations.

2nd Month

Infant comes on the dorsal side of the mother. Also, begins to play with peers. Now they spend more time engaging in social interactions with their age mates. Colour of the infant changes from black to brown.

3rd Month

Infant leaves the mother for short duration to play, explore and feed but during group movements it immediately rides on its mother's back.

4th Month

The earliest manifestation is a simple termination of nipple contact; the mother pushes the infant away. By this time, the infant learns to supplement the mother milk intensively with solid

food. At about four months of age, rhesus mothers begin to resist the attempts of their offspring to nurse Fooden¹⁶ (2000).

5th to 9th Month

The infant commonly undergoes weaning tantrums, while the mother bites or simply avoids the infant. Also, infant starts making contacts with other members of the group.

10th to 12th Month

Weaning process continues until the birth of the next infant. It was found that the amount of time spends on interacting with their mother declines substantially after weaning. Some authors have reported that weaning process continues until shortly before the birth of the next infant Lindburg⁷ (1971) while certain others have reported it to commensurate in the third or fourth month Kaufmann⁵ (1966). Gurerra¹² (1988) carried out study on withdrawal and retrieval activity of mother in rhesus monkey infants from birth upto 60th day of age.

ACKNOWLEDGEMENTS

The authors are thankful to the Department of Zoology, University of Jammu, Jammu for providing financial aid and various facilities to carry out the present study.

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