



Socio-ecological factors correlate with levels of stereotypic behaviour in zoo-housed primates.

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<http://dx.doi.org/10.1016/j.beproc.2013.05.005>, How to Cite or Link Using DOI

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Highlights

- Hair-pulling was expressed by 75% of the species.
- Pacing was expressed by 50% of the species.
- Hair-pulling levels were positively correlated with group size.
- Pacing levels were positively correlated with day journey lengths.

Abstract

Stereotypic behaviour often indicates poor welfare. It may develop when the animal's ability to carry out appropriate behavioural responses is limited, despite a high motivation to express them. Behavioural motivations vary across species. Consequently, under similar captive conditions, the sustained inability of animals to express certain behaviours is likely to affect some species more than others. We used a phylogenetic comparative approach to evaluate the socio-ecological factors affecting the manifestation of stereotypic behaviour in 24 species of zoo-housed primates. We examined the relationship between two stereotypic behaviours: hair-pulling and pacing, and the species' natural socio-ecological factors and captivity conditions. The degree of stereotypic behaviours was unaffected by phylogenetic relatedness between species. Stereotypic hair-pulling behaviour levels were positively correlated with natural group size. Stereotypic pacing levels were positively correlated with the animals' natural day journey length. These findings suggest large-group and wide-ranging primate species are more prone to suffer in captivity. Our findings facilitate the detection of species that are more susceptible to behaving stereotypically in captivity. We suggest that providing appropriate social stimuli, and increasing the complexity of the captive environment rather than enlarging it, are both attainable and expected to improve the animals' welfare.

Keywords

Hair-pulling; Motivation; Psychological welfare; Socio-ecological factors; Stereotypic pacing