

Linking the roles of personality and stress physiology for managing the welfare of captive big cats

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Abstract

Animal welfare is important for the humane treatment of animals under our care. Zoos and rescue centres manage various charismatic animals, such as big cats, with limited resources. It is therefore essential for caretakers to understand the needs of an individual big cat to ensure its welfare. However, these needs may differ due to a big cat's personality, which may be identified by its coping style in a stressful situation. In addition, stress is one of the major factors affecting animal welfare. There is limited evidence showing strong associations between personality and stress physiology in big cats. This review focuses on the integration of personality and stress physiology of captive big cats, to highlight possible improvements in their husbandry. Our review identifies key factors that may influence big cat responses to stressors. These influencing factors include: i) social interactions; ii) environment; iii) life history and evolutionary traits; iv) genetics; and v) health. The first two factors are relatively well covered in the literature; however, the final three are potentially very promising avenues for future research to better understand how we can improve big cat welfare.

Keywords: animal personality, animal welfare, coping style, glucocorticoids, individual variation, stressors