

Accepted Manuscript

Title: Adult wheel access interaction with activity and boldness personality in Siberian dwarf hamsters (*Phodopus sungorus*)

Authors: L. Leann Kanda, Amir Abdulhay, Caitlin Erickson

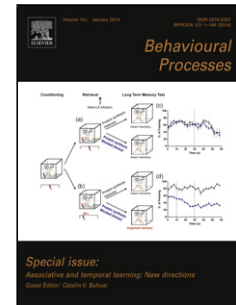
PII: S0376-6357(16)30265-0
DOI: <http://dx.doi.org/doi:10.1016/j.beproc.2017.02.021>
Reference: BEPROC 3399

To appear in: *Behavioural Processes*

Received date: 27-9-2016
Revised date: 16-1-2017
Accepted date: 24-2-2017

Please cite this article as: Kanda, L.Leann, Abdulhay, Amir, Erickson, Caitlin, Adult wheel access interaction with activity and boldness personality in Siberian dwarf hamsters (*Phodopus sungorus*).*Behavioural Processes* <http://dx.doi.org/10.1016/j.beproc.2017.02.021>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



<AT>Adult wheel access interaction with activity and boldness personality in Siberian dwarf hamsters (*Phodopus sungorus*)

<AU>L. Leann Kanda^{a,b} ##Email##lkanda@ithaca.edu##/Email##, Amir Abdulhay
^aCaitlin Erickson^a
<AU>

<AFF>^aDept. of Biology, Ithaca College, 953 Danby Rd., Ithaca, NY 14850 USA
<PA>^b**Corresponding author.607-274-3986.**

<ABS-HEAD>Highlights ► We measured home wheel access on personality in adult Siberian dwarf hamsters. ► Activity and boldness were repeatable and varied significantly among individuals. ► Wheel access had no effect on activity either at group or individual level. ► Inter-individual variation in boldness decreases in response to wheels.

<ABS-HEAD>**Abstract**

<ABS-P>Individual animal personalities interact with environmental conditions to generate differences in behaviour, a phenomenon of growing interest for understanding the effects of environmental enrichment on captive animals. Wheels are common environmental enrichment for laboratory rodents, but studies conflict on how this influences behavior, and interaction of wheels with individual personalities has rarely been examined. We examined whether wheel access altered personality profiles in adult Siberian dwarf hamsters. We assayed animals in a tunnel maze twice for baseline personality, then again at two and at seven weeks after the experimental group was provisioned with wheels in their home cages. Linear mixed model selection was used to assess changes in behaviour over time and across environmental gradient of wheel exposure. While animals showed consistent inter-individual differences in activity, activity personality did not change upon exposure to a wheel. Boldness also varies among individuals, and there is evidence for female boldness scores converging after wheel exposure, that is, opposite shifts in behavior by high and low boldness individuals, although sample size is too small for the mixed model results to be robust. In general, Siberian dwarf hamsters appear to show low behavioural plasticity, particularly in general activity, in response to running wheels.

<KWD>Keywords: activity; environmental enrichment; personality; rodent; running

wheel

<H1>1. Introduction

Provisioning of enhanced physical or mental stimulation promotes improvements in health, stress management, and expression of natural behaviours in captive animals (Coleman et al., 2013). Enriched environmental conditions during development helps to

Download English Version:

<https://daneshyari.com/en/article/5539653>

Download Persian Version:

<https://daneshyari.com/article/5539653>

[Daneshyari.com](https://daneshyari.com)