

Table 1 Summary of published and unpublished research on big cat personality and stress physiology.

Big cat Personality					
Author	Species	Sample Size	Origin	Methodology	Factors discussed
(Antonevich <i>et al</i> 2020)	Eurasian lynx	45	Captive	Behavioural observation	Social interaction, Health
(Goswami <i>et al</i> 2020)	Asiatic lion	35	Captive	Novel object/ Keeper survey	Social Interaction
Wang <i>et al</i> (2019)	Amur tiger	45	Captive	Behavioural observation/ Keeper survey	Genetics, Health
(Boccacino <i>et al</i> 2018)	Jaguar	4	Captive	Behavioural observation	Environment, Health
Kamyk (2017)*	African lion	12	Reintroduced [§]	Novel object	Social Interaction, Environment
(Pastorino <i>et al</i> 2017b)	Asiatic lion	4	Captive	Keeper survey	Social Interaction, Environment
	Tiger	9	Captive		
(Phillips <i>et al</i> 2017)	Cheetah	4	Captive	Keeper survey	Social Interaction, Environment
(Pastorino <i>et al</i> 2017a)	Tiger	8	Captive	Behavioural observation/ Keeper survey	Social Interaction, Health
(Dunston <i>et al</i> 2016)	African lion	11	Reintroduced [§]	Novel object/ Behavioural observation	Social Interaction, Environment
(Gartner <i>et al</i> 2014)	African lion	21	Captive	Keeper survey	Social Interaction, Genetics, Health
	Snow leopard	17	Captive		
(Chadwick 2014)*	Cheetah	37	Captive	Behavioural observation	Social Interaction, Environment, Genetics, Health

(Baker & Pullen 2013)	Cheetah	35	Captive	Novel object/ Behavioural observation	Social Interaction, Environment
(Gartner & Powell 2012)	Snow leopard	10	Captive	Keeper survey/ Novel object	Environment, Genetics
(Phillips & Peck 2007)	Royal Bengal tiger	7	Captive	Keeper survey	Social Interaction, Environment, Genetics
(Wielebnowski 1999)	Cheetah	44	Captive	Keeper survey/ Behavioural observation	Social Interaction, Environment, Genetics

Big cat Stress Physiology

Author	Species	Sample Size	Origin	Methodology	Factors discussed
(Azevedo <i>et al</i> 2020)	Iberian lynx	12	Captive, Wild	Hair cortisol & corticosterone metabolite EIA	—
(Burstahler <i>et al</i> 2019)	Canada lynx		Wild harvest	Hair cortisol metabolite EIA	Environment
(Naidenko <i>et al</i> 2019)	Amur tiger	--	Wild	Faecal cortisol metabolite EIA	--
	Royal Bengal tiger	--	Wild		
(Sgambelluri 2018)*	African lion	2	Captive	Saliva corticosterone metabolite EIA	Social Interaction, Environment, Genetics, Health
(Webster <i>et al</i> 2018)	African leopard	7	Captive & Wild	Faecal cortisol, corticosterone metabolites EIA	Environment, Life History and Evolutionary traits
(Malviya <i>et al</i> 2018)	Royal Bengal tiger	--	Wild	Faecal cortisol metabolite EIA	Environment, Genetics, Health
(Vaz <i>et al</i> 2017)	Royal Bengal tiger	18	Captive	Faecal corticosterone metabolite EIA	Social Interaction, Environment, Health
	Indian Leopard	9	Captive		
(Ivanov <i>et al</i> 2017)	Amur tiger	3	Captive	Faecal cortisol metabolite EIA	Environment

(Mesa-Cruz <i>et al</i> 2016)	Jaguar Puma	-- --	Wild Wild	Faecal corticosterone metabolite RIA	Genetics, Health
(Bhattacharjee <i>et al</i> 2015)	Royal Bengal tiger	5	Wild	Faecal cortisol metabolite EIA	Environment, Life History and Evolutionary traits, Health
(Pavlova <i>et al</i> 2015)	Amur leopard	--	Wild	Faecal cortisol metabolite EIA	Social Interaction, Environment, Health
(Parnell <i>et al</i> 2014)	Sumatran tiger	5	Captive	Faecal cortisol metabolite EIA	Social Interaction, Environment, Genetics, Health
(Mesa-Cruz <i>et al</i> 2014)	Jaguar	10	Wild	Faecal cortisol metabolite EIA /corticosterone metabolite RIA	Environment
(Pribbenow <i>et al</i> 2014)	Eurasian lynx Iberian lynx	3 5	Captive	Faecal cortisol & corticosterone metabolite EIA	Environment
(Fanson & Wielebnowski 2013)	Canada lynx	45	Captive	Faecal corticosterone metabolite EIA	Social interaction, Environment
(Ludwig <i>et al</i> 2013)	Cheetah	7	Captive	Faecal corticosterone metabolite EIA	—
(Terwissen <i>et al</i> 2013)	Canada lynx	3	Captive	Hair cortisol metabolite EIA	Health
(Watson <i>et al</i> 2013)	Amur leopard Amur tiger Cheetah Snow leopard Sumatran tiger	2 2 2 2 1	Captive Captive Captive Captive Captive	Faecal corticosterone metabolite EIA	--
(Narayan <i>et al</i> 2013)	Sumatran tiger Royal Bengal tiger	11 11	Captive Captive	Faecal cortisol metabolite EIA	Social Interaction, Environment, Health
(Creel <i>et al</i> 2013)	African lion	34	Wild	Faecal cortisol metabolite EIA	Social Interaction

(Conforti <i>et al</i> 2012)	Jaguar	16	Captive	Faecal cortisol metabolite RIA	Environment, Health
(Fanson <i>et al</i> 2012)	Canada lynx	39	Captive	Faecal cortisol & corticosterone metabolite EIA	Life history and Evolutionary traits
		135	Wild		
(Burgener <i>et al</i> 2008)	Snow leopard	2	Captive	Faecal cortisol metabolite EIA	Social Interaction, Environment
(Schildkraut 2016)*	African lion	9	Captive	Faecal and hair corticosterone metabolites EIA	Social Interaction, Environment, Health
(Dembiec <i>et al</i> 2004)	Tiger	5	Captive	Faecal cortisol metabolite RIA	Environment,
(Young <i>et al</i> 2004)	Cheetah	2	Captive	Faecal cortisol metabolite EIA/ corticosterone metabolite RIA	Social Interaction, Environment, Genetics
(Terio <i>et al</i> 2004)	Cheetah	40	Captive & Wild	Faecal cortisol metabolite RIA	Social Interaction, Environment, Health
(Nogueira & Silva 1997)	Jaguar	8	Captive	Blood cortisol metabolite RIA	Environment
	Cougar	13	Captive		
(Wildt <i>et al</i> 1988)	Cheetah	3	Captive	Blood cortisol metabolite RIA	Environment, Genetics, Health
	Tiger	7	Captive		
	Leopard	4	Captive		
	Puma	3	Captive		
(Brown <i>et al</i> 1988)	Tiger	3	Captive	Blood cortisol metabolite RIA	Genetics
	North Chinese leopard	6	Captive		
(Wildt <i>et al</i> 1987)	Cheetah	31	Captive & Wild	Blood cortisol metabolite RIA	Environment, Life History and Evolutionary traits, Genetics

Big Cat Personality and Stress Physiology

Author	Species	Sample size	Origin	Methodology	Factors discussed
(Razal <i>et al</i> 2016)	African cheetah	17	Captive	Behavioural observation, Keeper survey / Faecal corticosterone metabolite RIA	Social Interaction

(Miller <i>et al</i> 2016)	Cheetah	18	Captive	Behavioural observation, Keeper survey / Faecal corticosterone metabolite RIA	Social Interaction, Environment
(Bertocchi <i>et al</i> 2015)	Amur tiger	2	Captive	Behavioural observation/ Faecal Cortisol metabolite EIA	Social Interaction, Environment
(Torgerson-White & Bennett 2014)	African lion	6	Captive	Keeper survey / Faecal corticosterone metabolite RIA	Social Interaction, Environment
(DeCaluwe <i>et al</i> 2013)	Clouded leopard	16	Captive	Keeper survey / Faecal cortisol metabolite EIA	Environment
(Wielebnowski <i>et al</i> 2002)	Clouded leopard	72	Captive	Keeper survey / Faecal corticosterone metabolite RIA	Environment, Health
(Jurke <i>et al</i> 1997)	Cheetah	7	Captive	Keeper survey / Faecal cortisol metabolite RIA	Social Interaction, Environment, Genetics

*Thesis/ unpublished work; Reintroduced^s = Reintroduced animals from captivity to wild;

EIA = Enzyme immunoassay, RIA = Radioimmunoassay