

Table S1 Frequency of abnormal behaviour in global observations (± 119 hours). BM = body-manipulation, CL = clap, CO = coprophagy, HS = head-shake, CA = crossed-arm walk, PL = pluck, RO = rock, UI = urine-interaction. #Abn indicates the number of different abnormal behaviours shown.

ID	BM	CL	CO	HS	CA	MF	PL	RO	UI	#Abn
Erika	0	0	10	6	0	12	0	0	3	4
Fons	0	0	62	6	0	40	2	16	0	5
Gaby	2	1	34	8	2	22	6	0	29	8
Geisha	0	3	9	2	0	3	10	0	0	5
Ghineau	0	0	2	1	0	3	6	0	0	4
Giambo	1	0	14	128	0	16	2	1	0	6
Jimmie	2	0	4	2	1	4	0	18	1	7
Jing	1	0	33	2	0	27	0	0	0	4
Moni	68	0	3	3	85	4	0	3	0	6
Moniek	18	47	23	68	56	6	0	16	0	7
Morami	0	0	45	3	132	8	1	1	0	6
Raimee	7	0	14	4	2	38	6	0	1	7
Roosje	1	0	31	0	11	45	9	0	1	6
Tesua	4	0	13	6	1	8	4	3	0	7
Tushi	9	1	17	9	16	5	11	9	0	8

Table S2 MRQAP-DSP model results

Predictor	Estimate	p-value
Age	-0.03	0.086
Sex	0.12	0.409
Rank	-0.11	0.390
Kinship*	-0.89	0.016

$F(4, 206) = 7.18, P < 0.001. R^2 = 0.11$

Table S3 Wilcoxon-rank test results.

Individual	<i>Rho</i>	p-value (raw)	p-value (BH adjusted)
Erika	-0.06	0.593	0.653
Fons	-0.03	0.808	0.808
Gaby	-0.12	0.297	0.466
Geisha*	0.28	0.011	0.062
Ghineau	NA	NA	NA
Giambo**	0.36	0.001	0.015
Jimmie	NA	NA	NA
Jing	-0.12	0.282	0.466
Moni	0.13	0.231	0.466
Moniek	-0.12	0.266	0.466
Morami	0.07	0.514	0.632
Raimée	0.08	0.517	0.632
Roosje	-0.15	0.202	0.466
Tesua	NA	NA	NA
Tushi	NA	NA	NA