

Orthodontic analysis improves the accuracy of lip morphology prediction in facial reconstruction

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	Ak-Pr	Ak-InS	Ak-Me	Ss-Pr	Ss-Sm	Pr-InS	Pr-Id	Id-Sm	Id-Me	CejU1-InS	CN(L-R)	U1d(L-R)	U3d(L-R)	CejU3(L-R)	N-A-P	SNA	SNB	ANB	Gn-Go to S-N	U1 to NS	L1 to Gn-Go	L1 to Op	U1 to L1	InS to NP mm	Sex group	Age group
Ak-Pr	1.00	0.92	0.69	0.82	0.47	-0.03	-0.18	0.28	0.47	0.02	-0.04	0.03	-0.03	0.08	0.36	-0.13	-0.35	0.37	0.41	-0.31	0.07	-0.16	0.01	0.34	-0.04	-0.03
Ak-InS	0.92	1.00	0.77	0.75	0.58	0.37	0.05	0.27	0.49	0.16	-0.01	0.04	-0.07	0.08	0.39	-0.11	-0.35	0.41	0.47	-0.36	0.01	-0.13	0.06	0.35	-0.09	0.03
Ak-Me	0.69	0.77	1.00	0.56	0.81	0.33	0.41	0.44	0.80	0.13	0.06	0.02	0.00	0.12	0.13	0.01	-0.06	0.11	0.37	-0.02	-0.13	-0.03	-0.05	0.27	-0.34	0.05
Ss-Pr	0.82	0.75	0.56	1.00	0.53	-0.04	-0.18	0.21	0.40	-0.01	0.06	-0.02	-0.04	0.10	0.30	-0.16	-0.36	0.33	0.33	-0.42	0.03	-0.08	0.17	0.21	-0.15	0.01
Ss-Sm	0.47	0.58	0.81	0.53	1.00	0.36	0.58	0.60	0.51	0.17	-0.05	-0.05	-0.04	0.01	0.06	-0.02	-0.07	0.08	0.39	-0.07	-0.22	0.10	0.03	0.19	-0.26	0.13
Pr-InS	-0.03	0.37	0.33	-0.04	0.36	1.00	0.54	0.02	0.14	0.36	0.08	0.02	-0.10	0.00	0.14	0.02	-0.08	0.16	0.24	-0.21	-0.14	0.05	0.13	0.10	-0.15	0.15
Pr-Id	-0.18	0.05	0.41	-0.18	0.58	0.54	1.00	-0.02	0.00	0.24	0.05	-0.06	-0.01	-0.08	-0.14	0.14	0.23	-0.18	0.15	0.23	-0.16	0.14	-0.14	0.07	-0.15	0.15
Id-Sm	0.28	0.27	0.44	0.21	0.60	0.02	-0.02	1.00	0.56	0.01	-0.22	0.02	-0.02	0.04	-0.02	-0.05	-0.06	0.03	0.22	0.00	-0.26	0.10	0.07	0.05	-0.14	0.03
Id-Me	0.47	0.49	0.80	0.40	0.51	0.14	0.00	0.56	1.00	0.00	0.09	0.06	0.04	0.22	0.01	0.02	0.02	0.01	0.15	0.05	-0.16	-0.03	0.02	0.12	-0.45	-0.01
CejU1-InS	0.02	0.16	0.13	-0.01	0.17	0.36	0.23	0.01	0.00	1.00	-0.08	0.27	0.24	0.16	0.05	0.15	0.13	0.00	-0.05	0.23	0.15	-0.15	-0.30	0.24	-0.21	-0.32
CN(L-R)	-0.04	-0.01	0.06	0.06	-0.05	0.08	0.05	-0.22	0.09	-0.08	1.00	0.21	0.23	0.33	-0.04	0.04	0.07	-0.06	-0.17	-0.01	0.16	-0.12	-0.01	-0.01	-0.21	0.19
U1d(L-R)	0.03	0.04	0.02	-0.02	-0.05	0.02	-0.06	0.02	0.06	0.27	0.21	1.00	0.68	0.68	0.00	0.18	0.19	-0.05	-0.21	0.15	0.18	-0.20	-0.14	0.06	-0.19	-0.07
U3d(L-R)	-0.03	-0.07	0.00	-0.04	-0.04	-0.10	-0.01	-0.02	0.04	0.24	0.23	0.68	1.00	0.66	-0.18	0.19	0.32	-0.24	-0.36	0.35	0.26	-0.20	-0.28	0.02	-0.27	-0.10
CejU3(L-R)	0.08	0.08	0.12	0.10	0.01	0.00	-0.08	0.04	0.22	0.16	0.33	0.68	0.66	1.00	0.03	0.25	0.23	0.00	-0.25	0.10	0.17	-0.24	-0.08	0.05	-0.26	0.02
N-A-P	0.36	0.39	0.13	0.30	0.06	0.14	-0.14	-0.02	0.01	0.05	-0.04	0.00	-0.18	0.03	1.00	0.25	-0.37	0.95	0.49	-0.36	0.34	-0.45	-0.18	0.74	0.17	0.07
SNA	-0.13	-0.11	0.01	-0.16	-0.02	0.02	0.14	-0.05	0.02	0.15	0.04	0.18	0.19	0.25	0.25	1.00	0.79	0.20	-0.33	0.41	0.11	-0.13	-0.24	0.28	0.01	0.11
SNB	-0.35	-0.35	-0.06	-0.36	-0.07	-0.08	0.23	-0.06	0.02	0.13	0.07	0.19	0.32	0.23	-0.37	0.79	1.00	-0.45	-0.61	0.67	-0.06	0.11	-0.19	-0.12	-0.11	0.04
ANB	0.37	0.41	0.11	0.33	0.08	0.16	-0.18	0.03	0.01	0.00	-0.06	-0.05	-0.24	0.00	0.95	0.20	-0.45	1.00	0.50	-0.47	0.26	-0.37	-0.04	0.61	0.20	0.10
Gn-Go to S-N	0.41	0.47	0.37	0.33	0.39	0.24	0.15	0.22	0.15	-0.05	-0.17	-0.21	-0.36	-0.25	0.49	-0.33	-0.61	0.50	1.00	-0.48	-0.29	0.02	0.11	0.35	0.25	0.04
U1 to NS	-0.35	-0.39	-0.03	-0.47	-0.10	-0.18	0.26	-0.03	0.05	0.23	0.00	0.18	0.35	0.10	-0.33	0.42	0.66	-0.44	-0.47	1.00	0.25	-0.23	-0.71	0.20	-0.25	-0.11
L1 to Gn-Go	0.07	0.01	-0.13	0.03	-0.22	-0.14	-0.17	-0.26	-0.16	0.15	0.16	0.17	0.25	0.17	0.34	0.11	-0.06	0.26	-0.29	0.25	1.00	-0.84	-0.72	0.52	-0.07	-0.04
L1 to Op	-0.16	-0.13	-0.03	-0.08	0.10	0.05	0.14	0.10	-0.03	-0.15	-0.12	-0.20	-0.20	-0.24	-0.45	-0.13	0.11	-0.37	0.02	-0.21	-0.84	1.00	0.73	-0.66	0.05	0.02
U1 to L1	0.01	0.06	-0.05	0.17	0.03	0.13	-0.14	0.07	0.02	-0.30	-0.01	-0.14	-0.28	-0.08	-0.18	-0.24	-0.19	-0.04	0.11	-0.72	-0.73	0.73	1.00	-0.67	0.12	0.08
InS to NP mm	0.34	0.35	0.27	0.21	0.19	0.10	0.07	0.05	0.12	0.24	-0.01	0.06	0.02	0.05	0.74	0.28	-0.12	0.61	0.35	0.20	0.52	-0.66	-0.67	1.00	0.01	0.05
Sex group	-0.04	-0.09	-0.34	-0.15	-0.26	-0.15	-0.15	-0.14	-0.45	-0.21	-0.21	-0.19	-0.27	-0.26	0.17	0.01	-0.11	0.20	0.25	-0.26	-0.07	0.05	0.12	0.01	1.00	0.04
Age group	-0.03	0.03	0.05	0.01	0.13	0.15	0.15	0.03	-0.01	-0.32	0.19	-0.07	-0.10	0.02	0.07	0.11	0.04	0.10	0.04	-0.09	-0.04	0.02	0.08	0.05	0.04	1.00

Online Resource 12. Pearson correlation analysis between explanatory variables. Bold numbers indicate significant results.