

Supplementary data to:

Original article:

**CHARACTERIZING PSYCHOLOGICAL STATES IN PROFESSIONAL
ATHLETES THROUGH EEG: SEX-BASED DIFFERENCES**

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Table I: Descriptive characteristics of the participants

ID	Type of Sports	Sex	Weight (kg)	Height (cm)	Age (years)	Dominant
1	gymnast	F	56	162	24	R
2	gymnast	F	55	168	24	R
3	gymnast	F	59	160	22	R
4	gymnast	F	54	162	24	R
5	gymnast	F	46	154	18	R
6	gymnast	F	47	170	18	R
7	gymnast	F	50	168	18	R
8	gymnast	F	47	155	18	R
9	gymnast	F	52	159	20	R
10	gymnast	F	49	157	18	R
11	gymnast	F	50	158	21	R
12	gymnast	F	51	170	18	L
13	gymnast	M	64	164	24	R
14	gymnast	M	65	168	20	L
15	gymnast	M	55	164	20	R
16	swimmer	M	77	185	20	R
17	swimmer	F	58	166	36	R
18	swimmer	M	72	180	21	R
19	swimmer	F	57	163	18	L
20	swimmer	M	94	193	28	R
21	swimmer	F	49	160	26	R
22	swimmer	F	60	173	25	R
23	swimmer	M	75	178	18	R
24	swimmer	F	49	160	18	L
25	swimmer	F	63	164	18	R
26	swimmer	F	53	164	18	R
27	e-sports player	F	40	165	27	R
28	e-sports player	M	53	171	24	R
29	e-sports player	M	45	167	26	R
30	e-sports player	M	50	170	23	R
31	e-sports player	F	53	160	25	R
32	e-sports player	F	46	160	22	R
33	e-sports player	F	55	155	21	R
34	e-sports player	F	47	159	22	R
35	e-sports player	M	53	185	18	L
36	e-sports player	M	80	168	18	R

Abbreviations: F = Female; M = Male; R = Right; L = Left

Table II: QEEG data within the delta frequency band for all participants

ID	Brain areas (μV^2)					
	Pre-frontal	Frontal	Temporal	Central	Parietal	Occipital
1	141.94	38.648	34.141	23.304	23.569	22.973
2	90.122	39.245	22.759	25.967	26.222	23.480
3	85.066	48.055	30.220	41.539	36.794	34.992
4	75.671	42.442	55.719	30.473	32.671	44.469
5	195.56	78.222	37.489	52.980	42.976	36.527
6	176.53	102.37	61.603	74.334	60.664	61.073
7	101.64	33.946	13.336	24.412	19.749	19.290
8	201.63	81.160	49.219	55.449	47.569	39.333
9	187.48	53.376	36.900	44.608	39.302	32.131
10	133.34	79.851	46.783	52.965	47.748	45.336
11	113.68	59.622	31.199	40.159	31.778	22.314
12	138.68	55.713	32.472	34.051	27.882	30.055
13	109.82	56.843	36.761	36.548	29.136	21.525
14	65.103	31.565	19.608	25.288	21.523	18.229
15	107.41	45.396	25.056	28.541	27.734	30.589
16	107.75	59.123	58.929	47.107	50.872	27.162
17	331.13	84.388	55.266	55.957	56.358	74.323
18	133.02	70.010	38.144	34.811	26.302	33.718
19	112.49	89.600	51.383	71.589	67.346	73.822
20	58.655	33.096	18.162	42.694	33.706	33.548
21	81.940	59.746	49.931	35.122	34.336	32.634
22	235.07	150.00	159.48	94.147	92.971	95.281
23	85.326	49.450	40.604	31.450	26.394	16.008
24	230.95	77.300	25.831	34.534	27.465	21.861
25	162.74	95.816	115.16	60.477	56.478	57.114
26	128.29	96.300	79.294	95.999	93.611	79.989
27	121.93	50.500	25.664	25.459	20.467	19.460
28	113.37	71.824	61.496	61.199	60.515	57.150
29	277.36	88.228	103.12	45.940	55.818	68.207
30	230.05	109.81	88.850	84.971	79.508	83.703
31	150.25	65.200	36.656	37.031	30.918	21.759
32	403.95	176.00	115.91	127.95	91.486	97.007
33	148.31	61.200	46.434	48.002	41.642	43.382
34	97.288	34.400	13.924	18.405	24.232	15.512
35	105.73	64.272	31.329	39.553	43.685	65.509
36	67.740	47.558	38.537	45.545	37.697	24.626

Table III: QEEG data within the theta frequency band for all participants

ID	Brain areas (μV^2)					
	Pre-frontal	Frontal	Temporal	Central	Parietal	Occipital
1	4.4520	4.2705	1.8664	3.9654	3.1112	2.3790
2	9.1354	7.9667	3.1333	7.9711	7.1573	5.3365
3	6.3612	7.6386	3.2213	7.1465	5.5607	4.4954
4	5.2480	5.4982	3.9216	5.4466	5.1271	6.1572
5	13.448	9.1063	4.7353	8.2002	7.4696	6.0638
6	12.185	8.8432	4.4439	7.5630	6.2253	7.0284
7	7.1208	7.1221	2.1465	5.6780	3.5206	2.8431
8	11.939	9.7358	4.3311	7.8034	5.6765	6.4728
9	8.7740	6.5191	3.0906	5.7488	4.4290	3.1063
10	8.8178	7.8757	4.2392	7.1515	5.3331	4.4794
11	9.5662	6.5335	2.5365	5.0447	4.1563	3.0277
12	9.4419	9.1293	6.0137	8.1080	6.7203	6.2032
13	6.5484	5.2960	2.3483	4.3825	3.6383	3.3124
14	5.9197	4.6531	2.2569	3.7586	2.8622	2.1136
15	7.7804	6.3103	2.7239	4.5746	3.5465	3.4446
16	12.214	7.6737	4.4741	6.4016	5.2643	2.7468
17	8.1293	7.0962	3.9614	7.3447	6.5406	6.3468
18	10.642	7.7488	3.9504	6.6177	5.6959	3.5089
19	5.9068	5.7100	2.5321	4.8262	4.8702	6.1648
20	8.9607	8.5558	3.6466	5.8822	5.3791	4.6826
21	5.4786	5.5949	3.0703	3.4783	2.8189	2.4794
22	10.911	11.000	10.097	7.7767	6.5794	6.1700
23	4.6924	4.5696	2.4056	3.8972	2.6071	1.2826
24	18.380	8.8000	2.9599	5.5399	4.4994	2.9718
25	8.9823	7.2461	3.5742	6.3548	4.7547	4.9036
26	10.640	6.5600	2.9285	5.3696	4.5673	4.1423
27	8.9506	6.6200	3.2760	4.9716	4.1129	4.0404
28	6.8918	5.6922	3.5835	4.8141	4.0408	3.3592
29	20.611	6.9988	3.1565	4.5186	3.0616	2.5730
30	9.9091	6.2039	2.3789	4.8158	3.2786	2.4200
31	13.199	10.500	5.0560	8.3805	6.6155	4.2245
32	20.750	9.9000	4.8390	7.1318	5.7223	4.9936
33	6.7578	6.0300	3.5222	5.2746	4.1424	4.1973
34	9.3760	7.1700	4.1788	7.2733	5.9455	3.9769
35	9.3234	8.2428	3.5565	5.9282	5.0742	4.3317
36	6.2421	6.0448	2.6949	6.8609	4.8237	2.8419

Table IV: QEEG data within the alpha frequency band for all participants

ID	Brain areas (μV^2)					
	Pre-frontal	Frontal	Temporal	Central	Parietal	Occipital
1	3.1000	2.7056	1.7097	2.4924	2.1890	1.7395
2	10.144	12.184	4.9061	20.973	22.105	9.6928
3	4.2361	4.7081	2.3478	6.4573	8.5794	7.2543
4	5.2003	5.5237	3.1050	7.3234	9.3489	6.7734
5	19.227	22.384	12.856	26.935	26.788	19.802
6	9.0407	8.6336	5.1608	14.437	10.289	8.6636
7	12.578	10.683	5.2133	18.397	20.502	13.976
8	6.4629	5.5840	4.0604	6.3832	5.7610	5.1551
9	4.8917	4.8318	2.9628	4.3544	3.7747	3.1686
10	26.315	23.908	11.575	24.558	23.921	22.795
11	6.9096	6.9456	4.7693	6.8017	7.2189	4.5476
12	11.578	10.848	8.7864	10.832	10.950	8.8839
13	3.5622	3.0471	1.3678	3.0460	2.5137	2.0194
14	3.4114	3.1775	2.0335	2.8695	2.2874	1.9614
15	8.2052	9.3822	5.6232	17.238	16.238	10.573
16	4.7449	5.3182	3.3972	8.7675	7.2961	3.4227
17	10.794	10.507	4.6185	12.607	19.696	18.879
18	40.395	35.330	13.285	32.477	42.890	34.791
19	3.7267	3.6500	2.6792	5.7677	4.9226	4.1554
20	3.4261	3.0277	2.3568	3.5290	5.5011	9.0996
21	1.9552	2.2886	1.6339	1.7318	1.6731	1.5304
22	4.0735	4.6200	6.1546	3.6388	3.3970	3.4859
23	3.8544	4.8242	3.1020	8.1927	7.7198	2.6751
24	11.917	10.500	4.0613	8.0666	8.0675	6.3919
25	4.6874	4.6705	2.6201	5.8750	5.2562	4.9447
26	6.4427	4.5700	3.2166	7.5124	6.3655	8.3370
27	4.8887	4.0400	4.3275	3.4911	3.7939	3.8075
28	3.2163	2.5213	1.8064	2.2172	2.0151	1.9585
29	4.4152	2.4966	1.7617	2.1329	1.9743	1.4708
30	6.9981	6.3318	3.0669	7.4225	10.332	8.6546
31	35.405	33.700	15.999	27.623	29.450	21.781
32	5.4738	4.0700	2.7500	3.9361	3.9639	5.7044
33	9.9346	11.000	5.7178	11.760	10.932	10.357
34	5.8691	5.0400	3.2180	6.8817	5.8820	4.1698
35	4.0906	3.8749	1.7773	3.1973	2.8773	2.5601
36	5.6082	7.2108	3.7717	11.738	12.039	11.338

Table V: QEEG data within the beta frequency band for all participants

ID	Brain areas (μV^2)					
	Pre-frontal	Frontal	Temporal	Central	Parietal	Occipital
1	7.9054	5.2861	18.452	4.3301	3.7458	3.0946
2	10.093	7.6612	17.440	5.5663	5.9524	4.0422
3	5.8408	4.1142	2.6264	3.1804	3.5378	2.9675
4	5.5535	5.2829	4.2204	5.7208	8.5386	7.4166
5	9.8824	9.3236	50.440	8.6048	8.2558	6.2599
6	8.8630	9.1669	8.8444	8.8990	8.0903	7.3227
7	21.182	7.0361	3.7957	7.2040	6.1261	6.8634
8	14.795	10.512	15.347	10.260	10.393	9.0719
9	5.0857	5.4092	4.5281	5.3470	5.0390	3.9792
10	6.3000	6.4200	4.1571	6.6777	5.7066	5.5835
11	8.0929	8.5579	16.722	8.0869	8.5876	6.0283
12	15.600	8.7247	12.357	5.3097	5.1895	5.8715
13	5.2487	4.9498	2.0438	4.5275	3.6483	2.5695
14	4.6847	4.4446	9.9424	4.2762	4.0468	4.2040
15	3.9695	3.8977	2.2718	3.9902	4.1416	4.1665
16	6.1396	6.7051	5.9682	6.0744	6.4994	5.8306
17	16.023	14.761	17.682	16.027	14.631	11.943
18	5.2138	4.7137	6.3599	4.6350	5.8682	6.7458
19	11.087	8.3400	6.8326	8.4248	8.0685	6.0650
20	3.8686	6.7013	7.4421	5.4122	5.7172	14.589
21	6.7732	6.5567	6.2356	3.1068	2.6355	2.3984
22	7.8326	7.5200	16.878	6.1592	5.5693	4.5987
23	3.6308	4.7413	5.0384	3.4285	3.5622	3.1197
24	11.282	12.000	7.7270	8.6150	8.3974	6.7360
25	12.960	5.9674	5.3444	4.6706	5.2769	8.7188
26	3.9086	3.3100	4.2682	3.2878	4.3746	11.950
27	16.129	15.100	31.447	14.892	18.124	11.649
28	4.2017	2.8395	4.2303	2.4443	2.3798	2.8497
29	4.4029	3.1653	2.4969	2.6823	2.3751	1.8563
30	5.1663	6.7938	4.9369	8.0417	6.3878	4.6784
31	11.045	11.400	20.108	12.650	14.851	8.8038
32	7.2284	6.2600	4.5935	5.6281	5.5314	7.4142
33	5.9458	5.9100	4.2274	5.5153	4.6018	4.8886
34	24.047	4.5800	8.7347	3.7572	3.4293	4.8026
35	5.9831	6.2169	3.6438	4.6577	3.9247	3.6778
36	4.2035	8.3211	3.9212	4.3700	6.6394	18.105

Table VI: Athletic Coping Skills Inventory-28 (ACSI-28) data for all participants

ID	ACSI-28 subscales (points)						
	Coping	Coach	Concent	Confiden	Goal	Peak	Free
1	9	9	9	8	9	7	3
2	10	8	8	11	10	7	5
3	9	7	9	8	11	6	2
4	7	6	6	9	7	6	2
5	11	8	12	9	9	12	4
6	7	10	9	7	9	4	3
7	8	6	6	6	10	4	5
8	6	3	7	8	6	2	5
9	6	4	9	8	7	6	3
10	9	9	8	8	9	6	5
11	5	6	7	6	9	8	2
12	5	5	7	7	5	3	4
13	11	9	8	9	11	8	4
14	5	5	5	2	7	5	4
15	9	7	7	8	9	5	1
16	5	6	4	6	8	1	3
17	10	10	8	9	8	6	4
18	5	3	5	8	9	3	3
19	8	10	7	7	8	7	6
20	7	9	7	8	6	4	2
21	7	8	7	8	5	5	4
22	3	7	3	5	3	5	1
23	4	6	3	6	8	1	3
24	5	6	5	8	8	3	4
25	4	3	5	6	8	1	3
26	5	6	7	8	8	3	4
27	9	4	7	8	10	7	4
28	12	9	7	11	10	5	3
29	12	5	9	9	7	7	1
30	11	8	6	9	12	9	9
31	3	4	5	8	5	4	2
32	4	4	6	8	5	4	2
33	5	4	7	9	7	3	2
34	6	9	9	10	8	9	6
35	12	7	8	7	12	4	7
36	12	6	4	6	12	7	6

Abbreviations: Coping = Coping with adversity; Coach = Coachability; Concent = Concentration; Confiden = Confidence and achievement motivation; Goal = Goal setting/Mental preparation; Peak = Peaking under pressure; Free = Freedom from worry