

Supplementary Table 4. Network nodes of anxiety-depression-addiction-sleep disorder symptoms

	Symptom	Abbreviation	All sample (N=7,246)	Control group (N=5,744)	IGD group (N=789)	SMA group (N=713)
PHQ1	1. Little interest or pleasure in doing things	Little interest or pleasure	0.77±0.67	0.70±0.64	1.02±0.68	1.05±0.71
PHQ2	2. Feeling down, depressed, or hopeless	Depressed or hopeless	0.81±0.70	0.71±0.65	1.08±0.73	1.27±0.76
PHQ3	3. Trouble falling or staying asleep, or sleeping too much	Sleep problems	0.89±0.84	0.78±0.79	1.23±0.91	1.32±0.94
PHQ4	4. Feeling tired or having little energy	Tired or little energy	0.86±0.74	0.74±0.68	1.21±0.79	1.40±0.81
PHQ5	5. Poor appetite or overeating	Feeding problems	0.64±0.80	0.55±0.73	0.98±0.91	1.05±0.94
PHQ6	6. Feeling bad about yourself or that you are a failure or have let yourself or your family down	Feeling bad	0.90±0.85	0.78±0.79	1.32±0.89	1.48±0.90
PHQ7	7. Trouble concentrating on things, such as reading the newspaper or watching television	Trouble concentrating on things	1.00±0.86	0.86±0.80	1.49±0.89	1.54±0.91
PHQ8	8. Moving or speaking so slowly that other people could have noticed. Or the opposite being so fidgety or restless that you have been moving around a lot more than usual	Being slowly or the opposite	0.41±0.65	0.32±0.57	0.73±0.79	0.80±0.85
PHQ9	9. Thoughts that you would be better off dead, or of hurting yourself	Thoughts of suicide or self-injury	0.33±0.59	0.26±0.52	0.56±0.70	0.65±0.77
GAD1	1. Feeling nervous, anxious, or on edge	Nervous or anxious	0.87±0.61	0.79±0.56	1.11±0.62	1.28±0.69
GAD2	2. Not being able to stop or control worrying	Inability to control worrying	0.76±0.68	0.66±0.63	1.08±0.68	1.26±0.77
GAD3	3. Worrying too much about different things	Worrying too much	0.83±0.74	0.71±0.68	1.15±0.74	1.38±0.83
GAD4	4. Trouble relaxing	Trouble relaxing	0.69±0.71	0.58±0.65	1.00±0.74	1.20±0.81
GAD5	5. Being so restless that it is hard to sit still	Being restless	0.59±0.69	0.48±0.62	0.95±0.75	1.11±0.82
GAD6	6. Becoming easily annoyed or irritable	Easily annoyed or irritable	0.79±0.75	0.68±0.69	1.10±0.79	1.35±0.84
GAD7	7. Feeling afraid, as if something awful might happen	Feeling afraid	0.64±0.70	0.54±0.65	0.95±0.73	1.09±0.83
IGD1	1. Do you feel preoccupied with your gaming behavior? (Some examples: Do you think about previous gaming activity or anticipate the next gaming session? Do you think gaming has become the dominant activity in your daily life?)	Preoccupied with gaming behavior	1.76±0.82	1.62±0.71	2.86±0.82	1.71±0.77
IGD2	2. Do you feel more irritability, anxiety or even sadness when you try to either reduce or stop your gaming activity?	Irritability after reducing game time	1.45±0.68	1.31±0.54	2.47±0.79	1.41±0.59
IGD3	3. Do you feel the need to spend increasing amount of time engaged gaming in order to achieve satisfaction or pleasure?	Need to increase game time	1.59±0.76	1.44±0.62	2.70±0.78	1.54±0.70
IGD4	4. Do you systematically fail when trying to control or cease your gaming activity?	Fail to control gaming activity	1.63±0.81	1.47±0.65	2.82±0.84	1.59±0.80
IGD5	5. Have you lost interests in previous hobbies and other entertainment activities as a result of your engagement with the game?	Lost interests in previous hobbies	1.48±0.75	1.33±0.56	2.66±0.94	1.42±0.69
IGD6	6. Have you continued your gaming activity despite knowing it was causing problems between you and other people?	Continued gaming activity	1.46±0.71	1.32±0.55	2.57±0.85	1.36±0.59
IGD7	7. Have you deceived any of your family members, therapists or others because the amount of your gaming activity?	Deceived	1.26±0.57	1.16±0.41	2.05±0.90	1.26±0.56
IGD8	8. Do you play in order to temporarily escape or relieve a negative mood (e.g., helplessness, guilt, anxiety)?	Escape a negative mood	1.95±1.01	1.78±0.88	3.25±0.95	1.95±0.99
IGD9	9. Have you jeopardized or lost an important relationship, job or an educational or career opportunity because of your gaming activity?	Lost important relationship or job	1.59±0.85	1.43±0.69	2.76±0.96	1.57±0.81
SMA1	1. You spend a lot of time thinking about social media or planning how to use it.	Spend a lot of time	2.36±1.12	2.16±1.00	2.40±0.99	3.92±0.84
SMA2	2. You feel an urge to use social media more and more.	Urger to use	2.35±1.06	2.13±0.92	2.47±0.93	3.93±0.81
SMA3	3. You use social media in order to forget about personal problems.	Escape personal problems	1.81±0.94	1.59±0.74	2.04±0.87	3.31±1.01
SMA4	4. You have tried to cut down on the use of social media without success.	Fail to reduce use	1.97±0.99	1.77±0.83	2.09±0.87	3.39±1.07
SMA5	5. You become restless or troubled if you are prohibited from using social media.	Restless or troubled	1.78±0.97	1.56±0.76	2.05±0.94	3.29±1.05
SMA6	6. You use social media so much that it has had a negative impact on your job/studies.	Negative impact on job/studies	1.96±1.00	1.75±0.86	2.27±0.95	3.31±1.01
PSQI1	1. Subjective sleep quality	Subjective sleep quality	0.73±0.76	0.63±0.71	1.01±0.82	1.20±0.86
PSQI2	2. Sleep latency	Sleep latency	0.98±0.92	0.92±0.89	1.32±0.97	1.11±0.96
PSQI3	3. Sleep duration	Sleep duration	0.89±0.81	0.80±0.77	1.07±0.84	1.42±0.84
PSQI4	4. Habitual sleep efficiency	Habitual sleep efficiency	2.51±1.05	2.61±0.99	2.30±1.25	1.98±1.03
PSQI5	5. Sleep disturbances	Sleep disturbances	0.85±0.61	0.79±0.59	1.10±0.61	1.19±0.64
PSQI6	6. Use of sleeping medication	Use sleep medication	0.03±0.24	0.02±0.21	0.05±0.31	0.07±0.40
PSQI7	7. Daytime disfunction	Daytime disfunction	1.12±0.92	0.95±0.84	1.56±0.90	2.01±0.88

Values are presented as mean±standard deviation. PHQ1–9 refers to the items of PHQ-9, GAD1–7 refers to the items of GAD-7, IGD1–9 refers to the items of IGDS9-SF, SMA1–6 refers to the items of BSMAS, and PSQI1–7 refers to the seven factor score in scale. IGD, Internet Gaming Addiction; SMA, Social Media Addiction; PHQ-9, Patient Health Questionnaire-9; GAD-7, Generalized Anxiety Disorder 7-item; IGDS9-SF, Internet Gaming Disorder Scale-Short Form; BSMAS, Bergen Social Media Addiction Scale