**Supplementary Table1** Demographic and clinical characteristics of the patient (N=162)

|  |  |
| --- | --- |
| Characteristics | patient, N=162 |
| **Gender** |  |
| Male | 103(63.6) |
| Female | 59(36.4) |
| **Age** | 65.1±9.5 |
| **Age of onset** | 56.5±11.7 |
| **Duration of Parkinson** | 8.7±6.5 |
| **Education** |  |
| Less than high school(<12) | 64(39.5) |
| More than college(≧12) | 98(60.5) |
| **Years of education** | 107±4.8 |
| **Marital Status** |  |
| Unmarried | 16(9.9) |
| Married | 146(90.1) |
| **Unemployment** | 132(81.5) |
| **Comorbid with other diseases** | 107(66.0) |
| **Past psychiatric history** |  |
| No psychiatric history | 133(82.1 |
| Depressive disorder | 18(11.1) |
| Anxiety disorder | 5(3.1) |
| Insomnia | 7(4.5) |
| **Suicide history** | 1(0.6) |
| **Family psychiatric history** |  |
| No psychiatric history | 155(95.7) |
| Depressive disorder | 5(3.1) |
| Anxiety disorder | 2(1.2) |
| **Family suicide history** | 3(3.1) |
| **Anxiolytics/Hypnotics use** | 48(29.6) |
| **UPDRS scores** | 41.4±10.7 |
| **H&Y staging** | 2.3±0.4 |
| **BHS** | 5.9±4.5 |
| **FSS** | 26.5±16.6 |
| **CDRISC** | 30.5±9.5 |
| **BFI-10** |  |
| Extraversion | 4.3±2.8 |
| Agreeableness | 6.5±1.6 |
| Conscientiousness | 8.8±1.8 |
| Neuroticism | 5.8±2.1 |
| Openness | 6.8±1.5 |
| **HAMD** | 7.1±6.4 |
| **HAMA** | 8.2±7.1 |
| **MINI** |  |
| **Depressive disorders** |  |
| Major depressive disorder | 19(11.7) |
| Depressive disorder NOS | 23(14.2) |
| Dysthymia | 3(1.9) |
| **Adjustment disorder** | 4(2.5) |
| **Anxiety disorder NOS** | 5(3.1) |
| **Insomnia disorder** | 14(8.6) |
| **Others** | 25(15.4) |
| **No diagnosis** | 75(46.3) |

UPDRS= Unified Parkinson's Disease Rating Scale; BHS= Beck Hopelessness Scale；FSS= Fatigue Severity Scale; CORISC = Connor-Davidson Resilience Scale；BFI-10= Big Five Inventory-10；HAMD= Hamilton Depression Rating Scale；HAMA= Hamilton Anxiety Rating Scale; MINI= Mini International Neuropsychiatric Interview；Anxiety disorder NOS = Anxiety disorder not otherwise specified；Depressive disorder NOS= Depressive disorder not otherwise specified; Others= REM sleep behavior disorder、Depressive disorder not otherwise specified history、Major depressive disorder history、Bipolar and related disorder due to another medical condition