Table e-2. Symptoms clustering summary. Unless otherwise specified, statistics are reported as mean (sd).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Cluster | 1 | 2 | 3 | 4 | 5 | 6 |
|  | *n*(%) | 456 (50%) | 201 (22%) | 100 (11%) | 73 (8%) | 54 (6%) | 20 (2%) |
| 1. | Lightheadedness | 0.5 (1.1)2,3,4,5,6 | 1.7 (2.5)1,5,6 | 2.5 (3.4)1,6 | 1.9 (2.5)1,6 | 3.3 (3.7)1,2,6 | 7.7 (3.6)1,2,3,4,5 |
| Cardiovascular | Fainting | 0.1 (0.6)6 | 0.3 (1)6 | 0.1 (0.5)6 | 0.5 (1.2)6 | 0.1 (0.5)6 | 6.3 (2.9)1,2,3,4,5 |
| 2. Sleep/ | Drowsiness | 0.9 (1.8)2,3,4,5,6 | 2.4 (2.9)1,5,6 | 2.3 (2.9)1,5,6 | 2.2 (3)1,5,6 | 6.6 (4.2)1,2,3,4 | 5.2 (3)1,2,3,4 |
| fatigue | Fatigue | 1.2 (1.9)2,3,4,5,6 | 4.2 (3.7)1,4,5 | 4.5 (4)1,5 | 5.9 (4.2)1,2 | 8 (3.5)1,2,3 | 6.9 (3.1)1 |
|  | Insomnia | 1.1 (2.2)2,3,4,5,6 | 3 (3.8)1,4 | 3.1 (4.2)1,4 | 5.3 (4.8)1,2,3 | 4.7 (4.8)1 | 5 (2.4)1 |
|  | RLS | 0.5 (1.3)2,4,5,6 | 2.4 (3.5)1,3,6 | 1 (2.4)2,5,6 | 1.8 (3.2)1,6 | 3.2 (4.2)1,3 | 4.9 (2.6)1,2,3,4 |
| 3. Mood/ | Loss interest | 0.4 (0.9)2,4,5,6 | 1.1 (1.8)1,4,5,6 | 0.6 (1.3)4,5,6 | 6.6 (3.9)1,2,3,5 | 4.5 (3.7)1,2,3,4 | 5.3 (2.8)1,2,3 |
| apathy | Loss activities | 0.6 (1.3)2,4,5,6 | 1.9 (2.7)1,4,5,6 | 1 (2)4,5,6 | 7.8 (3.5)1,2,3,5,6 | 6 (4.5)1,2,3,4 | 4.7 (2.9)1,2,3,4 |
|  | Anxiety | 0.8 (1.6)2,4,5,6 | 2.2 (2.9)1,4,5,6 | 1.6 (2.9)4,5,6 | 5.8 (4.3)1,2,3 | 6.4 (4.4)1,2,3 | 4.7 (3)1,2,3 |
|  | Depression | 0.7 (1.4)2,4,5,6 | 2.7 (3.2)1,3,4,5,6 | 1.4 (2.3)2,4,5,6 | 7.4 (4)1,2,3 | 5.8 (4.3)1,2,3 | 5.3 (3.2)1,2,3 |
|  | Flat affect | 0.3 (1)2,4,5,6 | 1.1 (2.1)1,4,5 | 0.8 (2.1)4,5,6 | 4.8 (4.3)1,2,3,5 | 2.9 (3.7)1,2,3,4 | 3 (2.1)1,3 |
|  | Loss pleasure | 0.3 (1.1)4,5,6 | 1 (1.8)4,5,6 | 0.8 (1.8)4,5,6 | 7.3 (3.8)1,2,3,5,6 | 4.6 (4.2)1,2,3,4 | 3.6 (2.8)1,2,3,4 |
| 4. Perception/ | Hallucination | 0.2 (0.9)5,6 | 0.6 (1.7)5,6 | 0.7 (1.9)5,6 | 0.6 (1.8)5,6 | 2.7 (3.3)1,2,3,4,6 | 4.8 (3.3)1,2,3,4,5 |
| hallucination | Delusion | 0.1 (0.6)4,5,6 | 0.3 (1.4)4,5,6 | 0.1 (0.6)4,5,6 | 1.3 (3)1,2,3,6 | 2 (3.5)1,2,3,6 | 4.7 (3.4)1,2,3,4,5 |
|  | Diplopia | 0.2 (0.8)5,6 | 0.6 (1.4)5,6 | 0.4 (1.6)5,6 | 0.8 (2.2)5,6 | 3.1 (4.4)1,2,3,4 | 3.6 (2.7)1,2,3,4 |
| 5. Attention/ | Loss concentration | 0.7 (1.5)2,3,4,5,6 | 2.6 (2.9)1,5,6 | 2.2 (3.4)1,5,6 | 2.9 (2.9)1,5 | 7.5 (3.9)1,2,3,4 | 5.1 (2.8)1,2,3 |
| memory | Forget explicit | 0.7 (1.3)2,3,4,5,6 | 2.2 (2.7)1,5,6 | 2.2 (3)1,5,6 | 2.1 (2.5)1,5,6 | 8.5 (3.2)1,2,3,4,6 | 4.8 (2.9)1,2,3,4,5 |
|  | Forget implicit | 0.5 (1.2)2,3,4,5,6 | 1.9 (2.6)1,5,6 | 1.5 (2.7)1,5,6 | 1.8 (2.2)1,5,6 | 7.6 (4.1)1,2,3,4,6 | 5.1 (3.2)1,2,3,4,5 |
| 6. | Drooling | 0.6 (1.5)2,3,4,5,6 | 2.3 (3.3)1,5,6 | 3.3 (4.1)1,6 | 3.3 (4.2)1,6 | 4.2 (4.8)1,2 | 6.2 (3.3)1,2,3,4 |
| Gastrointestinal | Swallowing | 0.3 (0.8)2,3,5,6 | 2 (3)1,6 | 1.2 (2)1,6 | 1.2 (2)6 | 2.3 (2.9)1,6 | 6.5 (4.2)1,2,3,4,5 |
|  | Constipation | 1.5 (2.7)2,3,4,5,6 | 3 (3.8)1,6 | 3.8 (4.4)1,6 | 3.7 (4.4)1,6 | 4.5 (4.9)1,6 | 8.8 (4.4)1,2,3,4,5 |
| 7. Urinary | Urinary urgency | 0.9 (1.7)2,3,4,5,6 | 1.8 (2.4)1,3,5,6 | 6.6 (3.8)1,2,4 | 2.4 (3.4)1,3,5,6 | 7.7 (4.3)1,2,4 | 6.2 (3.5)1,2,4 |
|  | Urinary frequency | 0.9 (1.8)3,4,5,6 | 1.3 (1.9)3,4,5,6 | 7.7 (3.5)1,2,4 | 3.1 (3.6)1,2,3,5,6 | 6.2 (4.5)1,2,4 | 6.7 (3.1)1,2,4 |
|  | Nocturia | 1.7 (2.3)3,4,5,6 | 2.6 (2.9)3,4,5,6 | 8.5 (3.5)1,2,4 | 4.6 (4.2)1,2,3,5 | 6.9 (4.4)1,2,4 | 7.1 (3.4)1,2 |
| 8. Sexual | Sex drive | 0.7 (1.7)2,3,4,5,6 | 1.9 (3.4)1,5 | 3 (4.1)1,5 | 3.6 (4.4)1,5 | 6 (5.3)1,2,3,4 | 3.9 (5.3)1 |
|  | Sex dysfunction | 0.7 (2)3,4,5,6 | 1.8 (3.3)3,5 | 3.4 (4.3)1,2 | 2.3 (4.2)1,5 | 5 (5.2)1,2,4 | 3.8 (5.6)1 |
| 9. | Unexplained pain | 0.7 (1.8)2,3,4,5,6 | 2.6 (3.9)1 | 2.4 (4)1 | 2.3 (3.6)1 | 4.3 (5)1 | 4.3 (2.2)1 |
| Miscellaneous | Gustation/olfaction | 1.2 (2.5)2,4,5,6 | 4 (4.2)1 | 2.5 (3.6) | 3 (3.9)1 | 4 (4.7)1 | 5.5 (4.7)1 |
|  | Weight change | 0.8 (1.4)2,4,5,6 | 1.9 (3.1)1,5 | 1.8 (3)5 | 2.1 (2.8)1 | 3.6 (4.3)1,2,3 | 4 (3.9)1 |
|  | Sweating | 0.6 (1.6)2,3,4,5,6 | 2.5 (3.9)1 | 2.4 (3.9)1 | 2.1 (3.6)1 | 2.8 (3.9)1 | 3.9 (3.4)1 |
| Motor | Axial | 2.3 (2)2,3,4,5,6 | 3.5 (2.6)1,5,6 | 4 (2.8)1,6 | 4.4 (2.7)1,6 | 5.3 (3.3)1,2,6 | 8.5 (2.3)1,2,3,4,5 |
| symptoms | Bradykinesia | 2.1 (1.2)4,5,6 | 2.5 (1.4)6 | 2.5 (1.4)6 | 2.9 (1.4)1,6 | 3 (1.6)1,6 | 4.5 (1.7)1,2,3,4,5 |
|  | Rigidity | 2 (1.2)6 | 2.3 (1.5)6 | 2.3 (1.4)6 | 2.5 (1.3)6 | 2.6 (1.5)6 | 4.7 (1)1,2,3,4,5 |
|  | Tremor | 2.6 (2.4)6 | 2.5 (2.4)6 | 2.1 (2.5)6 | 2.5 (2.6)6 | 2.4 (2.8)6 | 5.8 (5.3)1,2,3,4,5 |
|  | Motor comp | 1.9 (2.5)2,4,5,6 | 3.5 (3)1,6 | 2.7 (2.7)6 | 3.7 (3.3)1,6 | 3.9 (3.7)1,6 | 8 (3.7)1,2,3,4,5 |
| Variables not | Sex | 67 | 57 | 64 | 49 | 63 | 50 |
| used in analysis | CISI PD total | 6.4 (3.5)2,3,4,5,6 | 9.3 (4.1)1,5,6 | 9.4 (4.1)1,6 | 10.7 (4.6)1,6 | 11.8 (5.5)1,2,6 | 18.4 (4.2)1,2,3,4,5 |
|  | Age | 62.8 (10)3,5,6 | 63.8 (10)5 | 68.3 (7.5)1 | 63.1 (9.2) | 69.7 (9.2)1,2 | 72.1 (7.7)1 |
|  | PD onset | 56.2 (10.8) | 55 (10.7) | 58.2 (10) | 54.8 (10.3) | 58.8 (11.7) | 59.2 (8.6) |
|  | PD duration | 6.6 (4.8)2,3,5,6 | 8.8 (5.9)1 | 10.1 (6.7)1 | 8.3 (4.9) | 11 (8.5)1 | 12.8 (6.5)1 |
| *n* Significant difference with cluster S*n* (corrected ) | | | | | | | |