**Supplementary Table 1A**

**Table 1**

*Parkinson’s Disease Diagnosis and Treatment Information by Affective Forecasting Task*

|  |  |  |
| --- | --- | --- |
|  | **Positive**  **(*n* = 39)** | **Negative**  **(*n* = 41)** |
|  | ***n* (%)** | ***n* (%)** |
| Disease duration (years) | *M =* 6.35, *SD* = *3*.85a | *M =* 6.21, *SD* = *3*.74b |
| **Disease Onset** |  |  |
| Young (below 49 years) | 7 (18.42) | 7 (17.50)b |
| Late (50 and above) | 31 (81.58) | 33 (82.50)b |
| **H&Y Stage** | ***M =* 2.32*, SD =* 0.88a** | ***M =* 2.27*, SD =* 0.88c** |
| 1-1.5 | 9 (24.32) | 9 (23.08) |
| 2-2.5 | 13 (35.14) | 15 (38.46) |
| 3 | 12 (32.43) | 12 (30.77) |
| 4 | 3 (8.11) | 3 (7.69) |
| **Current Parkinson’s Disease Treatmentd** | | |
| Levedopa + Benserazide | 28 (71.79) | 31 (75.61) |
| Levedopa + Carbidopa | 4 (10.26) | 3 (7.32) |
| Levedopa + Carbidopa + Entacapone | 6 (15.38) | 5 (12.20) |
| Rasagiline | 11 (28.21) | 12 (29.27) |
| Pramipexole | 10 (25.64) | 10 (24.39) |
| Rotigotine | 3 (7.69) | 3 (7.32) |
| Safinamide | 1 (2.56) | 1 (2.44) |
| Deep Brain Stimulation | 5 (12.82) | 5 (12.20) |

H&Y = Modified Hoehn and Yahr scale. MMSE = Mini-Mental State. Disease onset based upon the Parkinson’s Foundation’s classification (see parkinson.org). a*n* = 37. b*n* = 40. c*n* = 39. dMajority of participants were using multiple treatments. *Note.* All participants were asked to complete both the positive and negative Affective Forecasting tasks. See participant section for details regarding exclusion.

**Supplementary Table 1B**

*Additional Participant Demographic Breakdowns*

|  | **Parkinson’s Disease** | | **Controlc** |
| --- | --- | --- | --- |
|  | **Positivea**  ***n* (%)** | **Negativeb**  ***n* (%)** | ***n* (%)** |
| **Ethnicity** | | | |
| Caucasian | 35 (89.74) | 36 (87.80) | 39 (92.86) |
| Asian | 1 (2.56) | 1 (2.44) | 2 (4.76) |
| Indigenous/Torres Strait | - | - | 1 (2.38) |
| African | - | - | - |
| Pacific Islander | 1 (2.56) | 2 (4.88) | - |
| Other | 2 (5.13) | 2 (4.88) | - |
|  |  |  |  |
| **Native Language** | | | |
| English | 35 (89.74) | 36 (87.80) | 40 (95.24) |
| Mandarin | 1 (2.56) | 1 (2.44) | - |
| Italian | - | - | - |
| Cantonese | - | - | - |
| Arabic | - | - | - |
| Vietnamese | - | - | - |
| Greek | - | - | - |
| Other | 3 (7.69) | 4 (9.76) | 2 (4.76) |
|  |  |  |  |
| **Relationship Status** | | | |
| Single | 11 (28.21) | 12 (29.27) | 5 (11.91) |
| Married | 22 (56.41) | 23 (56.10) | 23 (54.76) |
| **Relationship Status (continued)** | | | |
| De Facto | 3 (7.69) | 3 (7.32) | 3 (7.14) |
| Widowed | 1 (2.56) | 1 (2.44) | 1 (4.76) |
| Other | 2 (5.13) | 2 (4.88) | 9 (21.43) |
|  |  |  |  |
| **Employment Status** | | | |
| Unemployed | 7 (17.95) | 6 (14.63) | 1 (2.38) |
| Part-time | 2 (5.13) | 2 (4.88) | 9 (21.43) |
| Full-time | 4 (10.26) | 4 (9.76) | 8 (19.05) |
| Retired | 23 (58.97) | 26 (63.41) | 21 (50.00) |
| Other | 3 (7.69) | 3 (7.32) | 3 (7.14) |
|  |  |  |  |
| **Handedness** | | | |
| Right | 35 (89.74) | 37 (90.24) | 23 (56.10) |
| Left | 4 (10.26) | 4 (9.76) | 18 (43.90) |

a*n* = 39 b*n* = 41 c*n* = 42

**Supplementary Table 2**

*Informant Demographic and Participant Relationship Breakdown for Positive Affective Forecasting*

|  | **Parkinson’s disease**  ***n* = 18** | **Control**  ***n* = 29** |
| --- | --- | --- |
| ***M (SD)*** | ***M (SD)*** |
| **Demographics** | | |
| Mean Age (years) | 63.50 (11.76)a | 59.41 (16.55) |
| Mean Education (years) | 14.44 (3.78)b | 15.76 (3.10) |
| Gender (M:F) | 5:12b | 8:21 |
| **Relationship with Participant** | | |
| Mean length (years) | 38.63 (15.99)b | 33.11 (19.05) |
| Type (Partner:Relative:Friend) | 11:1:5b | 15:7:7 |
| Mean self-reported knowledge  (rated 1 – 7) | 6.82 (0.39)b | 6.55 (0.83) |
| Mean self-reported closeness  (rated 1 – 7) | 6.78 (0.43) | 6.46 (0.88) |
| Live together (Yes:No) | 10:8 | 16:13 |
| **If no, frequency of physical contact** | ***n* (%)** | ***n* (%)** |
| Most days | 3 (37.50) | 3 (23.08) |
| Once a week | 2 (25.00) | 6 (46.15) |
| Once a fortnight | 2 (25.00) | 2 (15.38) |
| Once a month | 1 (12.50) | 1 (7.69) |
| Every few months | - | 1 (7.69) |

a*n* = 16. b*n* = 17.

**Supplementary Table 3**

*Informant Demographic and Participant Relationship Breakdown for Negative Affective Forecasting*

|  | **Parkinson’s disease**  ***n* = 20** | **Control**  ***n* = 29** |
| --- | --- | --- |
| ***M (SD)*** | ***M (SD)*** |
| **Demographics** | | |
| Mean Age (years) | 62.22 (11.83)a | 59.41 (16.55) |
| Mean Education (years) | 14.33 (3.66)a | 15.76 (3.10) |
| Gender (M:F) | 5:14b | 8:21 |
| **Relationship with Participant** | | |
| Mean length (years) | 38.56 (15.32)b | 33.11 (19.05) |
| Type (Partner:Relative:Friend) | 11:3:5b | 15:7:7 |
| Mean self-reported knowledge  (rated 1 – 7) | 6.84 (0.38)b | 6.55 (0.83) |
| Mean self-reported closeness (rated 1 – 7) | 6.80 (0.41) | 6.46 (0.88) |
| Live together (Yes:No) | 10:10 | 16:13 |
| **If no, frequency of physical contact** | ***n* (%)** | ***n* (%)** |
| Most days | 3 (30.00) | 3 (23.08) |
| Once a week | 3 (30.00) | 6 (46.15) |
| Once a fortnight | 3 (30.00) | 2 (15.38) |
| Once a month | 1 (10.00) | 1 (7.69) |
| Every few months | - | 1 (7.69) |

a*n* = 18. b*n* = 19.

**Supplementary Table 4**

*Participants Classification of Background Variables with Cut off Scores*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Measure | Positivea | | Negativeb | |
| PD | Control | PD | Control |
| **AES** |  |  |  |  |
| Score ≤ 34 | 28 | 37 | 29 | 37 |
| Score > 34 | 11 | 5 | 11 | 5 |
| **HADS** |  |  |  |  |
| **Anxiety** |  |  |  |  |
| Score < 8 | 23 | 26 | 24 | 26 |
| Mild (Score 8-10) | 5 | 13 | 6 | 13 |
| Moderate (Score 11-14) | 9 | 3 | 8 | 3 |
| Severe (Score 15-21) | 2 | 0 | 3 | 0 |
| **Depression** |  |  |  |  |
| Score < 8 | 26 | 39 | 29 | 39 |
| Mild (Score 8-10) | 10 | 3 | 9 | 3 |
| Moderate (Score 11-14) | 3 | 0 | 3 | 0 |
| Severe (Score 15-21) | 0 | 0 | 0 | 0 |
| **PDSS-2** |  |  |  |  |
| Score < 15 | 12 | - | 12 | - |
| Poor Sleeper  (Score ≥ 15) | 1 | - | 1 | - |
| Clinically Relevant Sleep Disorder (Score ≥ 18) | 26 | - | 28 | - |

AES = Apathy Evaluation Scale. HADS = The Hospital Anxiety and Depression Scale. PDSS-2 = Parkinson’s Disease Sleep Scale Revised. aParkinson’s disease*n* = 39, control *n* = 42. bParkinson’s disease*n* = 41, control *n* = 42.

**Supplementary Material 5**

*Self-report background data and anosognosia:*

With the exception of one informant-rated measure, the background clinical measures relied on self-report. Self-report measures can be problematic in clinical cohorts given that they require both emotional insight (Murphy and Lilienfeld, 2019) and a willingness to self-disclose personal information. However, as the PD participants in this study had to meet the cut off for no cognitive impairment (score ≤ 24 on MMSE), and anosognosia is uncommon in PD in those who meet this criterion (Orfei et al., 2018), it is unlikely that inaccurate self-appraisal would have impacted the findings of this study.

Murphy, B. A., & Lilienfeld, S. O. (2019). Are self-report cognitive empathy ratings valid proxies for cognitive empathy ability? Negligible meta-analytic relations with behavioral task performance. *Psychological Assessment, 31*(8), 1062-1072. https://doi.org/10.1037/pas0000732

Orfei, M. D., Assogna, F., Pellicano, C., Pontieri, F. E., Caltagirone, C., Pierantozzi, M., ... & Spalletta, G. (2018). Anosognosia for cognitive and behavioral symptoms in Parkinson's disease with mild dementia and mild cognitive impairment: Frequency and neuropsychological/neuropsychiatric correlates. *Parkinsonism & Related Disorders*, *54*, 62-67. https://doi.org/10.1016/j.parkreldis.2018.04.015

*Affective forecasting and prospection:*

Prospection at its broadest level refers to one’s capacity to envisage, think about, and prepare for the future, and thus affective forecasting may be considered under this domain. Affective forecasting has been established as a critical determinant of future-oriented behaviors, which makes sense given the emotional basis of this skill (Miloyan & Suddendorf, 2015). Importantly, the influence of affect in prospective memory functioning has been noted across both the normal ageing and clinical literature (e.g., Hostler et al., 2017; Mioni et al., 2015; Rendell et al., 2011; Rendell et al., 2012), with emotionally evocative stimuli found to enhance functioning. Similarly, emotions play an important role in episodic future thinking, a foundational element of episodic foresight (Acevedo-Molina et al., 2020). Taken together, it is therefore possible that affective forecasting be important in the successful implementation of future intentions and capacity to engage in episodic foresight, with future work now needed to empirically assess this.

Acevedo-Molina, M. C., Novak, A. W., Gregoire, L. M., Mann, L. G., Andrews-Hanna, J. R., & Grilli, M. D. (2020). Emotion matters: The influence of valence on episodic future thinking in young and older adults. *Consciousness and Cognition*, *85*, Article e103023. https://doi.org/10.1016/j.concog.2020.103023

Hostler, T. J., Wood, C., & Armitage, C. J. (2018). The influence of emotional cues on prospective memory: A systematic review with meta-analyses. *Cognition and Emotion*, *32*(8), 1578-1596. https://doi.org /10.1080/02699931.2017.1423280

Miloyan, B., & Suddendorf, T. (2015). Feelings of the future. *Trends in Cognitive Sciences*, *19*(4), 196-200. https://doi.org/10.1016/j.tics.2015.01.008

Mioni, G., Meligrana, L., Rendell, P. G., Bartolomei, L., Perini, F., & Stablum, F. (2015). Event-based prospective memory in patients with Parkinson’s disease: the effect of emotional valence. *Frontiers in Human Neuroscience*, *9*, Article e427. https://doi.org/10.3389/fnhum.2015.00427

Rendell, P. G., Henry, J. D., Phillips, L. H., De la Piedad Garcia, X., Booth, P., Phillips, P., & Kliegel, M. (2012). Prospective memory, emotional valence, and multiple sclerosis. *Journal of Clinical and Experimental Neuropsychology*, *34*(7), 738-749. https://doi.org/10.1080/13803395.2012.670388

Rendell, P. G., Phillips, L. H., Henry, J. D., Brumby-Rendell, T., de la Piedad Garcia, X., Altgassen, M., & Kliegel, M. (2011). Prospective memory, emotional valence and ageing. *Cognition & Emotion*, *25*(5), 916-925. https://doi.org/10.1080/02699931.2010.508610