



Institute of Psychology, Chinese Academy of Sciences, Beijing, China
Dept. of Psychology, University of Chinese Academy of Sciences, Beijing, China
Dept. of Neurology, Peking University Third Hospital, Beijing, China
Center for Brain and Cognitive Sciences, School of Psychological and Cognitive Sciences, Peking University, Beijing, China
PKU-IDG/McGovern Institute for Brain Research, Peking University, Beijing, China
Dept. of Neurology, University of Lübeck, Lübeck, Germany
Institute of Neuroscience, Key Laboratory of Primate Neurobiology, CAS Center for Excellence in Brain Science and Intelligence Technology, Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences, Shanghai, China

A B , A C ,

Introduction: D₂ (D₂) H₂ versus D₂ (D₂) H₂

Methods: D₂ (N = 57) versus D₂ (N = 40)

(fi₁) versus (fi₂) versus (fi₃)

Results: D₂ (N = 57) versus D₂ (N = 40)

(fi₁) versus (fi₂) versus (fi₃)

Conclusion: D₂ (N = 57) versus D₂ (N = 40)

(fi₁) versus (fi₂) versus (fi₃)

(D)

M D

1-3 fff

4,5

(E)

E

i+1 i F. 1) i-1 d.



Fig. 2. Memory performance in the Wisconsin Card Sorting Test (WCST). (A) Bar chart showing % Responses for Transposition, Item, and Reference conditions across three groups: HC (red), PD (blue), and PD-MCI (green). (B) Bar chart showing % Responses for the same conditions across the same groups. (C) Bar chart showing % Responses for the same conditions across the same groups. (D) Bar chart showing % Responses for the same conditions across the same groups. Asterisks indicate significant differences (p < 0.05).

Table 2

Model	Bayesian model (BF ₁₀)					
	Model	I	A	F	I	fi
Model 1	3.34	193.54	0.25	45.69	9.95 × 10 ³	6.10 × 10 ⁵
Model 2	1.77	0.21	3.58	0.13	0.65	0.23
Model 3	6.22	43.91	0.92	6.01	8.11 × 10 ³	1.78 × 10 ⁵
Model 4	1.97 × 10 ³	22.90	27.33	1.50	1.37 × 10 ⁵	2.44 × 10 ⁴
Model 5	0.29	0.39	0.41	0.22	0.25	0.25
Model 6	1.00	79.91	0.11	10.53	2.68 × 10 ³	1.65 × 10 ⁵
Model 7	0.38	0.06	0.90	0.03	0.13	0.05
Model 8	1.34	13.73	0.24	1.57	1.71 × 10 ³	3.72 × 10 ⁴
Model 9	399.36	7.62	6.88	0.41	2.87 × 10 ⁴	4.96 × 10 ³

2:1. I, D, A, F, G, (F(2,93) = 4.70, p = 0.011, η² = 0.09). B, D, D-MCI, D, A, D, t(68) = 3.06, p = 0.005, D-MCI: t(65) = 4.54, p < 0.001, ff, fi, ff, fi, (p > 0.21). (HC: 2.2%; D: 2.0%; D-MCI: 3.2%).

3.3. Effect of D2/3 receptor agonists

Figure 2D shows the effect of D2/3 receptor agonists on memory performance. The results show that the D2/3 receptor agonist significantly improved memory performance in the PD-MCI group (p < 0.001) compared to the PD group (p = 0.59). The results also show that the D2/3 receptor agonist significantly improved memory performance in the HC group (p < 0.10).

4. Discussion

The results of this study show that memory performance is significantly impaired in the PD-MCI group compared to the PD group. The results also show that the D2/3 receptor agonist significantly improved memory performance in the PD-MCI group (p < 0.001) compared to the PD group (p = 0.59). The results also show that the D2/3 receptor agonist significantly improved memory performance in the HC group (p < 0.10). The results suggest that the D2/3 receptor agonist may be a potential treatment for memory impairment in the PD-MCI group.

- 7 K.H. , J.G. , H.L. , K. , M. 13 (3–4) (2005).
- 8 J.L. , G.D. B. , H. , A. C. 41 (2) (2000) 101–175.
- 9 M. M. , A. , F. , B. , F. , C. 154 (2016) 69–80.
- 10 A.M. , M. , K. , L.A. E. , I. N. , F. , fi. 13 (3–4) (2005) 267–273.
- 11 M.M. B. , J. , E. C. , C. B. , J. , M. , J.C. H. , A. , C. 12 (5) (2009) 671–678.
- 12 M.J. H. , G.J. H. , A.D. B. , M. (2) (2014) 339–373.
- 13 C.M. D. , L. C. , A. D. , F. B. , E. B. , M. , D2 , B. LD. 207 (1) (2009) 35–45.
- 14 C.L. , C. , G. , C.E. C. , M. D. 25 (15) (2010) 2649–2653.
- 15 I. L. , J.G. G. , A.I. , B.A. , D. , C. , B. M. , C.H. A. , K. M. , C.H. , G. , D. A. , J. K. , M.C. , D.J. B. , A. B. , M. E. , D. , F. , M. D. 27 (3) (2012) 349–356.
- 16 J.C. D. , A. , M. , M. A. , C. N. , L. L. , C. G. , G. , C. , M. , J. K. , K. , J. , M. CA. , N. 75 (19) (2010) 1717–1725.
- 17 K. , C. H. , A. , M. , M. M. , D. , C. , A. , D. , A. , C. N. 17 (6) (2002) 547–565.
- 18 F. , L. , M. , J. M. 51 (1) (2004) 115–135.
- 19 N. B. , G.J. H. , M. 106 (3) (1999) 551–581.
- 20 F. , L. , A. , B. 9 (1) (2002) 59–79.
- 21 M. , D. N. 105 (4) (1998) 761–781.
- 22 K. , L. , L.A. J. ff. (E.), C. , M. , B. , N. , 1951, 112–131.
- 23 D. D. , J.K. , B. 64 (9) (2008) 739–749.
- 24 M. D.E. , B. , A. 66 (2015) 115–142.
- 25 J.A. C. , H.J. , M. D. , N. J. , E. , D. ff. , A. 115 (6) (1992) 1701–1725.
- 26 J. E. , N. , A. N. , G. M. , M. H. , D. , C. , N. 29 (4) (2017) 728–738.
- 27 D. N. , K. , K. K. , L. , K. N. , K. E. , I. A. , K. E. , A. C. , F. , H. , N. 7 (2013) 318.
- 28 K. , A. M. , M. , D. , C. , M. I. , C. , B. 16 (2) (2003) 273–284.
- 29 K. , D. N. , K. , I. H. ff. , G. , H. , L. , C. 3 (2012) 125.
- 30 C.M. E. , M. , H.E. , I. H. , A. N. 126 (6) (2012) 376–383.