

SUPPLEMENTARY MATERIALS

**Post-Stroke Depression and Cognitive Aging: A multicenter, prospective cohort study**

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Table S1. Recurrence vs. no recurrence cases among cognitive decliners

Months	Younger adult patients (<65 years), N = 42		Older adult patients (≥65 years), N = 75	
	No recurrence	Recurrence	No recurrence	Recurrence
6	10	0	16	0
12	5	0	9	0
18	5	0	10	0
24	5	0	13	0
30	2	0	11	0
36	4	1	4	1
48	5	0	7	1
60	5	0	2	1
Total	41	1	72	3

Table S2. The hazard ratios of PSD adjusted for background variables by sex in older adult patients

Variables	Male, N = 803		Female, N = 563	
	Estimate (SE)	Hazard Ratio (95% CI)	Estimate (SE)	Hazard Ratio (95% CI)
Age	0.04 (0.03)	1.04 (0.98–1.11)	-0.03 (0.03)	0.97 (0.92–1.03)
Limited education (<9 years)	-0.66 (0.44)	0.52 (0.22–1.23)	-0.46 (0.41)	0.63 (0.28–1.42)
K-MMSE at 3 mo	-0.13 (0.07)	0.88 (0.76–1.02)	-0.14 (0.05)**	0.87 (0.79–0.96)
PSD	0.92 (0.35)**	2.50 (1.26–4.96)	0.59 (0.34)	1.80 (0.93–3.51)

K-MMSE: Korean version of the Mini-Mental State Examination; PSD: post-stroke depression; SE: standard error; CI: confidence interval. \*\*  $p < 0.01$ .

Table S3. The hazard ratios of PSD adjusted for background variables by sex in younger patients

Variables	Male, N = 1265		Female, N = 580	
	Estimate (SE)	Hazard Ratio (95% CI)	Estimate (SE)	Hazard Ratio (95% CI)
Age	0.03 (0.03)	1.03 (0.98–1.09)	0.05 (0.05)	1.05 (0.96–1.15)
Limited education (<9 years)	1.14 (0.45)*	3.12 (1.29–7.54)	-0.23 (0.73)	0.79 (0.19–3.30)
K-MMSE at 3 mo	-0.24 (0.11)*	0.79 (0.63–0.98)	-0.48 (0.17)**	0.62 (0.44–0.87)
PSD	0.24 (0.43)	1.28 (0.55–2.95)	-0.37 (0.67)	0.69 (0.19–2.57)

K-MMSE: Korean version of the Mini-Mental State Examination; PSD: post-stroke depression; SE: standard error; CI: confidence interval. \*  $p < 0.05$ , \*\*  $p < 0.01$ .

Table S4. The hazard ratios of PSD controlling cognitive fluctuation across waves, adjusted for background variables

Variables	Younger adult patients (<65 years), N = 1845		Older adult patients (≥65 years), N = 1366	
	Estimate (SE)	Hazard Ratio (95% CI)	Estimate (SE)	Hazard Ratio (95% CI)
Age	0.03 (0.03)	1.03 (0.97–1.10)	0.01 (0.02)	1.01 (0.96–1.06)
Limited education (<9 years)	0.83 (0.53)	2.30 (0.82–6.47)	-0.39 (0.34)	0.68 (0.35–1.31)
Female sex	-0.75 (0.52)	0.47 (0.59–0.97)	0.16 (0.30)	1.17 (0.65–2.10)
K-MMSE at 3 mo	-0.28 (0.13)*	0.76 (0.59–0.97)	-0.14 (0.05)**	0.87 (0.79–0.95)
PSD	0.53 (0.45)	1.67 (0.70–4.13)	0.67 (0.29)*	1.94 (1.13–3.35)

K-MMSE: Korean version of the Mini-Mental State Examination; PSD: post-stroke depression; SE: standard error; CI: confidence interval. \*  $p < 0.05$ , \*\*  $p < 0.01$ .

Table S5. Comparison of baseline K-GDS-SF and K-MMSE scores by sex in older patients

Variables	PSD group, N = 438			No-PSD group, N = 931			Total, N = 1269		
	Male	Female	t	Male	Female	t	Male	Female	t
n	224	214	N/A	580	351	N/A	804	565	N/A
K-GDS-SF at 3mo	10.64 (2.27)	10.86 (2.31)	-0.97	3.28 (2.10)	3.87 (2.02)	-4.26***	5.32 (3.94)	6.52 (4.01)	-5.46***
K-MMSE at 3mo	26.13 (2.74)	24.41 (4.09)	5.16***	27.49 (2.26)	25.93 (3.31)	7.79***	27.11 (2.48)	25.35 (3.70)	9.85***

Data are shown as mean (standard deviation). PSD: post-stroke depression; K-GDS-SF: Korean Geriatric Depression Scale Short Form; K-MMSE: Korean version of the Mini-Mental State Examination. \*\*\*  $p < 0.001$ .