Multimedia appendix 1 Path analysis based on raw scores of neurocognitive test

Table S1. Model fit and indirect effects of the proposed mediation model when using raw score

| Dependent variable                          | CFI  | Total effect \( \beta \) (95%CI) | Indirect effects \( \beta \) (95%CI) (physical activity) | Indirect effects \( \beta \) (95%CI) (depression) | PM |
|---------------------------------------------|------|----------------------------------|----------------------------------------------------------|-------------------------------------------------|----|
| CAVLT–Total learning (raw score)            | .92  | –6.40 (–7.81, –5.12)             | –1.21 (–1.85, –.69)                                       | –.37 (–.82, –.08)                                | 19%|
| CAVLT–Delayed recall (raw score)            | .92  | –2.00 (–2.42, –1.58)             | –.31 (–.50, –.15)                                        | –.10 (–.22, –.01)                                | 15%|
| Verbal fluency (raw score)                  | .92  | –2.03 (–3.10, –.97)              | –.63 (–1.14, –.18)                                       | –.34 (–.68, –.10)                                | 31%|
| Digit span (raw score)                      | .91  | –1.26 (–1.81, –.73)              | –.20 (–.43, .02)                                        | –.01 (–.15, .12)                                 | 16%|
| Visual span (raw score)                     | .93  | –.66 (–1.06, –.24)               | –.03 (–.20, .16)                                        | .01 (–.10, .11)                                  | 4% |
| CTMT–A \( ^a \) (raw score)                | .94  | 6.93 (4.65, 9.38)                | 1.07 (.06, 2.28)                                        | –.01 (–.58, .51)                                 | 16%|
| CTMT–B \( ^a \) (raw score)                | .93  | 33.83 (17.59, 51.10)             | 2.53 (–4.04, 1.44)                                      | –1.11 (–4.56, 2.20)                              | 1% |
| Dominant hand (raw score)                   | .92  | 9.38 (3.39, 15.97)               | 4.01 (1.54, 7.00)                                        | .88 (–.84, 2.89)                                 | 43%|
| Nondominant hand (raw score)                | .90  | 14.00 (5.47, 31.45)              | .37 (–8.46, 4.91)                                        | .19 (–3.48, 2.70)                                | 0 %|

CFI: Comparative Fit Index
PM: Percent mediated.
95% Bias–corrected confidence intervals (95% CI) were presented (bootstrap sample size = 2000), which did not include 0 showing the mediation effect was statistically significant \( P<.05 \). Results were reported after controlling for significant background variables \( P<.10 \) and other potential confounders.
Figure S1 Mediation effects of physical activity and depressive symptoms in the association between HIV status and cognitive function (raw score)

*: p < 0.05; **: p < 0.01; ***: p < 0.001

The path analysis presented the standardized regression weights and P value of each path.

CAVLT-TL, Chinese Auditory Verbal Learning Test-total learning; CAVLT-DR, Chinese Auditory Verbal Learning Test-total learning-delayed recall; CTMT-A, Chinese Trail Making Test Part A; CTMT-B, Chinese Trail Making Test Part B