

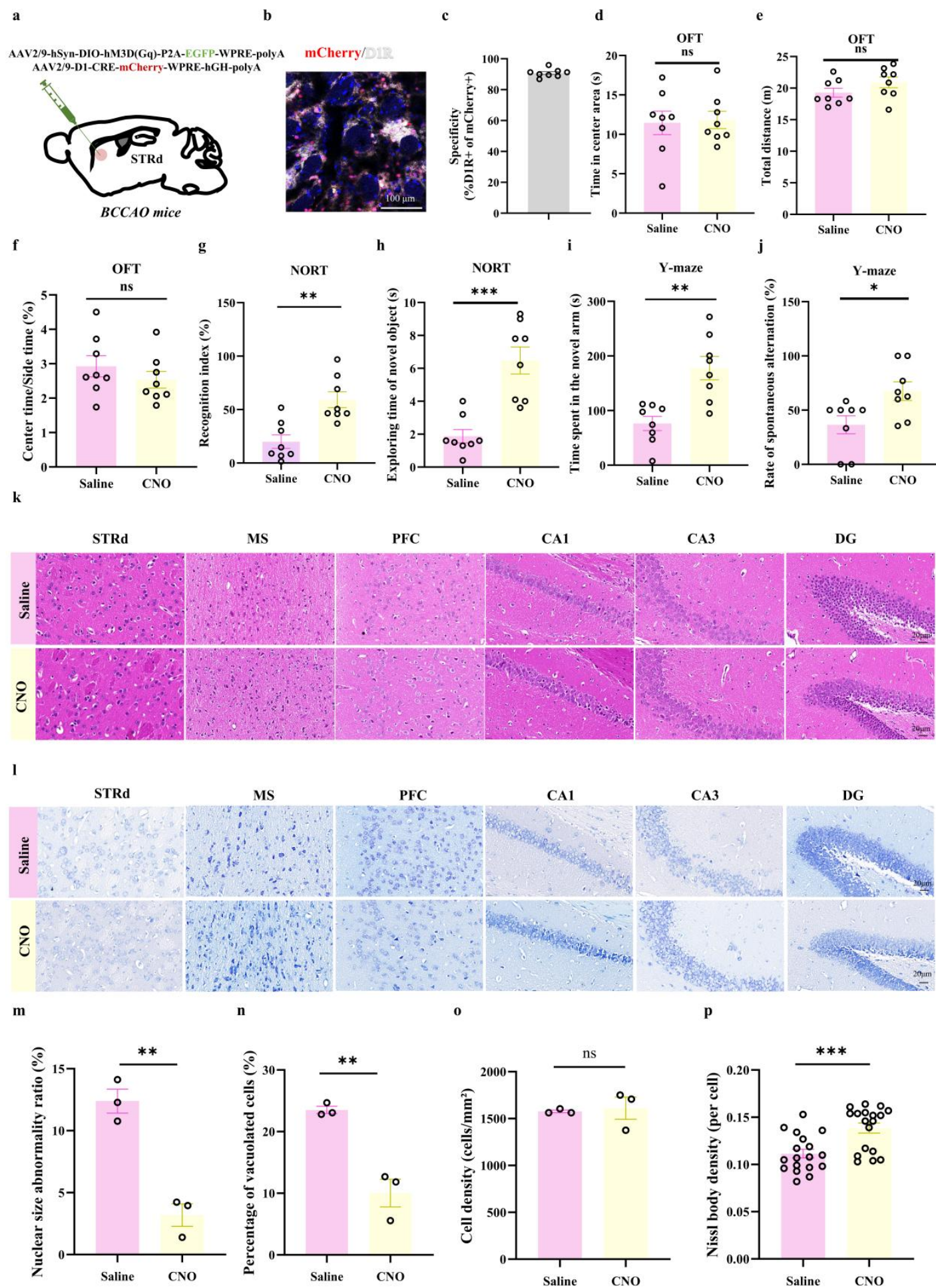


Fig. S7 The D1-MSNs subtype mediates the cognitive impact of STRd^{GABA} neurons in VaD mice.

(a) Schematic diagram of virus injection into the STRd of BCCAO mice. (b) Specificity verification of virus expression. (c) Percentage of mCherry⁺ cells co-labeled with DIR ($n = 8$). (d) Time spent in the central area during the open field test (OFT, $n = 8$). (e) Total distance traveled during the OFT ($n = 8$). (f) Ratio of time spent in the central area to the side area during OFT ($n = 8$). (g) The novel object recognition index in the NORT ($n = 8$). (h) Exploration time of the novel object in NORT ($n = 8$). (i) Exploration time in the novel open arm of the Y-maze test ($n = 8$). (j) Spontaneous alternation rate in the Y-maze test ($n = 8$). (k) Representative H&E staining images of different brain regions from each group. Scale bar = 20 μ m. (l) Representative Nissl staining images of different brain regions. Scale bar = 20 μ m. (m) Percentage of nuclei with abnormal size ($n = 3$). (n) Percentage of vacuolated cells ($n = 3$). (o) Neuronal density expressed as neuron number per mm² ($n = 3$). (p) Density of Nissl bodies per cell ($n = 18$ cells). Data are expressed as mean $\pm$ SEM; * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$, **** $P < 0.0001$; two-tailed unpaired Student's t-test (d-j, m-p).