1. **Supplemental Material**
   1. **Correlations between hippocampal subfields and PTSD symptoms**
      1. Bivariate relationships between hippocampal subfields (T1; obtained via cross-sectional pipeline), sex, age, and T3 PTSD symptoms are presented in Supplemental Table 1. None of the correlations between hippocampal volumes, subfield or whole, and PTSD symptoms were significant, even before correction for multiple comparisons (all uncorrected *p*s > .05). Results of general linear models (GLMs) are included in Table 3 of the main text.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Supplemental Table 1.**Correlations coefficients for hippocampal subfields (T1) and future PTSD (T3) | | | | | | | | | | | | | | | | | |
| *Measure* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 1. Sex | - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Age | .03 | - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. PTSD Symptom Severity | .09 | -.06 | - |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. Hippocampal tail | -.08 | -.09 | .09 | - |  |  |  |  |  |  |  |  |  |  |  |  |
| 5. Subiculum | **-.37\*** | -.01 | -.05 | **.56\*** | - |  |  |  |  |  |  |  |  |  |  |  |
| 6. CA1 | **-.39\*** | .01 | -.09 | **.52\*** | **.78\*** | - |  |  |  |  |  |  |  |  |  |  |
| 7. Hippocampal fissure | **-.19\*** | .09 | .01 | **.29\*** | **.41\*** | **.42\*** | - |  |  |  |  |  |  |  |  |  |
| 8. Presubiculum | **-.42\*** | -.09 | -.09 | **.43\*** | **.83\*** | **.69\*** | **.32\*** | - |  |  |  |  |  |  |  |  |
| 9. Parasubiculum | **-.35\*** | -.02 | -.11 | **.27\*** | **.58\*** | **.45\*** | .10 | **.65\*** | - |  |  |  |  |  |  |  |
| 10. Molecular Layer | **-.39\*** | -.02 | -.08 | **.59\*** | **.87\*** | **.96\*** | **.43\*** | **.77\*** | **.52\*** | - |  |  |  |  |  |  |
| 11. GC-DG | **-.42\*** | .06 | -.14 | **.47\*** | **.74\*** | **.88\*** | **.42\*** | **.64\*** | **.50\*** | **.92\*** | - |  |  |  |  |  |
| 12. CA3 | **-.33\*** | .12 | -.13 | **.34\*** | **.51\*** | **.75\*** | **.41\*** | **.37\*** | **.33\*** | **.77\*** | **.89\*** | - |  |  |  |  |
| 13. CA4 | **-.39\*** | .07 | -.15 | **.45\*** | **.72\*** | **.84\*** | **.43\*** | **.61\*** | **.50\*** | **.89\*** | **.99\*** | **.90\*** | - |  |  |  |
| 14. Fimbria | **-.42\*** | -.12 | -.06 | .09 | **.40\*** | **.30\*** | **-.04** | **.47\*** | **.38\*** | **.32\*** | **.25\*** | **.09\*** | **.22\*** | - |  |  |
| 15. HATA | **-.32\*** | **.23\*** | -.10 | **.21\*** | **.53\*** | **.64\*** | **.26\*** | **.48\*** | **.41\*** | **.61\*** | **.63\*** | **.60\*** | **.61\*** | **.38\*** | - |  |
| 16. Whole hippocampus | **-.40\*** | -.01 | -.07 | **.68\*** | **.89\*** | **.94\*** | **.45\*** | **.79\*** | **.57\*** | **.98\*** | **.92\*** | **.75\*** | **.90\*** | **.36\*** | **.63\*** | - |
| *Note:* N = 167; **\* uncorrected *p* < .05**; **+** this result did not survive correction for multiple comparisons; **Hemi,** hemisphere; **ICC,** intraclass correlation; **L,** left; **R**, right; **CA,** cornu ammonis; **GC-DG,** granule cell layer of dentate gyrus; **HATA,** hippocampal-amygdaloid transitional area. | | | | | | | | | | | | | | | | | |

* + 1. Correlations between hippocampal subfields (T3; obtained via cross-sectional pipeline), sex, age, and current PTSD symptoms are presented in Supplemental Table 2; no relationships between hippocampal subfields or whole volume and PTSD symptoms survived correction for multiple comparisons using the Holm-Bonferroni method (all adjusted *p*s > .28). GLM results are included in Table 4 of the main text.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Supplemental Table 2.**Correlations coefficients for hippocampal subfields (T3) associated with PTSD | | | | | | | | | | | | | | | | | |
| *Measure* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 1. Sex | - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2. Age | .10 | - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3. PTSD Symptom Severity | .04 | -.02 | - |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4. Hippocampal tail | -.09 | -.03 | **.17+** | - |  |  |  |  |  |  |  |  |  |  |  |  |
| 5. Subiculum | **-.38\*** | -.01 | -.07 | **.55\*** | - |  |  |  |  |  |  |  |  |  |  |  |
| 6. CA1 | **-.40\*** | .04 | -.09 | **.57\*** | **.79\*** | - |  |  |  |  |  |  |  |  |  |  |
| 7. Hippocampal fissure | **-.29\*** | .12 | -.06 | **.31\*** | **.50\*** | **.48\*** | - |  |  |  |  |  |  |  |  |  |
| 8. Presubiculum | **-.46\*** | -.09 | -.10 | **.43\*** | **.83\*** | **.70\*** | **.38\*** | - |  |  |  |  |  |  |  |  |
| 9. Parasubiculum | **-.35\*** | -.02 | -.11 | **.27\*** | **.55\*** | **.44\*** | **.23\*** | **.60\*** | - |  |  |  |  |  |  |  |
| 10. Molecular Layer | **-.40\*** | .02 | -.10 | **.61\*** | **.88\*** | **.96\*** | **.50\*** | **.78\*** | **.50\*** | - |  |  |  |  |  |  |
| 11. GC-DG | **-.45\*** | .03 | -.14 | **.50\*** | **.76\*** | **.89\*** | **.49\*** | **.66\*** | **.51\*** | **.93\*** | - |  |  |  |  |  |
| 12. CA3 | **-.34\*** | .08 | -.15 | **.41\*** | **.60\*** | **.79\*** | **.47\*** | **.42\*** | **.38\*** | **.82\*** | **.90\*** | - |  |  |  |  |
| 13. CA4 | **-.41\*** | .03 | -.14 | **.50\*** | **.74\*** | **.86\*** | **.50\*** | **.63\*** | **.51\*** | **.91\*** | **.99\*** | **.92\*** | - |  |  |  |
| 14. Fimbria | **-.39\*** | -.15 | -.06 | .09 | **.31\*** | **.28\*** | -.02 | **.46\*** | **.34\*** | **.28\*** | **.25\*** | .10 | **.21\*** | - |  |  |
| 15. HATA | **-.30\*** | **.22\*** | -.10 | **.25\*** | **.56\*** | **.68\*** | **.35\*** | **.47\*** | **.44\*** | **.64\*** | **.65\*** | **.62\*** | **.61\*** | **.31\*** | - |  |
| 16. Whole hippocampus | **-.41\*** | <.01 | -.07 | **.70\*** | **.89\*** | **.95\*** | **.51\*** | **.79\*** | **.55\*** | **.99\*** | **.80\*** | **.80\*** | **.91\*** | **.65\*** | **.63\*** | - |
| *Note:* **\* uncorrected *p* < .05**; **+** this result did not survive correction for multiple comparisons; **Hemi,** hemisphere; **ICC,** intraclass correlation; **L,** left; **R**, right; **CA,** cornu ammonis; **GC-DG,** granule cell layer of dentate gyrus; **HATA,** hippocampal-amygdaloid transitional area; **N = 139**. | | | | | | | | | | | | | | | | | |

* 1. **T1 – T3 Hippocampal Subfield Measurement****Reliability**

*Percent volume difference (PVD) and intraclass correlation coefficients (ICC).* To evaluate longitudinal reliability of hippocampal subfield measures, the longitudinal processing stream was implemented for T1 and T3 (Reuter et al., 2010, 2012). One-hundred forty-one participants had usable scans at T1 and T3. Note, T1 was chosen rather than T2 as the first time point simply due to the larger sample size available (N = 141). Briefly, the longitudinal processing stream entails the creation of an unbiased base template between timepoints for a given subject. From this template, atlas registration, surface parcellations and subcortical segmentations are initialized from the within-subject template (Reuter et al., 2010, 2012).

Average percent volume difference (PVD, Equation 1) was calculated for each subfield to determine volumetric correspondence.

Percent Volume Difference = (1)

In a similar manner, intra-class correlation coefficients (ICC) were calculated to assess within-subject variability of hippocampal subfield measurement across time. Using the statistical package “irr” in R (Gamer et al., 20112), ICC (3,1) was used to estimate the agreement of hippocampal subfield measurements for T1 – T3 (N =141) scans. The ICC was modeled by a two-way mixed-effects model with random subject and fixed session effects. For both PVD and ICC, calculations for T1 – T3 were done on both the cross-sectional and longitudinal processing stream outputs (Brown et al., 2020).

**Results.**

*PVD (T1* – *T3).* Supplemental Figure 1 portrays average PVD between T1 and T3 for hippocampal subfield volumes processed in the cross-sectional and longitudinal processing streams (N = 141). For all subfields, the longitudinal stream produced less differences in average volume between timepoints compared to the cross-sectional stream. The subfields demonstrating highest consistency (PVD < 3%) resulted from longitudinal processing and include the bilateral hippocampal tail, subiculum, CA1, molecular layer, and whole hippocampal volume. The bilateral fissure, parasubiculum, and HATA show the least consistency when processed with either stream showing greater than 5% difference in volume across time.

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*Supplemental Figure 1*. Percent Volume Differences for all hippocampal subfields across time (T1-T3) for both cross-sectional (dark purple) and longitudinal (light purple) processing streams. Error bars represent standard error. **L,** left hemisphere; **R,** right hemisphere; **CA,** cornu ammonis; **ML,** molecular layer; **GC\_ML\_DG**, granule cell layer of the dentate gyrus; **HATA**, hippocampal-amygdaloid transition area; **whole,** whole hippocampal volume. **N=141.**

*ICC (T1-T3).* Results of the ICC analysis indicated good (between 0.75-0.9) to excellent (greater than 0.9) (Koo & Li, 2016) reliability across time (T1-T3) for both processing streams (Supplemental Table 3). Reliability for the longitudinal stream across subfields ranged from 0.90-0.99, while reliability for the cross-sectional stream ranged from 0.86-0.97. Despite having the least consistency among the subfields (PVD > 5%), the bilateral fissure, parasubiculum, and HATA all demonstrate good reliability when processed with the cross-sectional (all ICC > 0.86) or longitudinal stream (all ICC > 0.90).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Supplemental Table 3.**Intraclass correlations coefficients for hippocampal subfields (T1 – T3) processed through cross-sectional and longitudinal pipelines with 95% confidence intervals | | | | | | | |
| Subfield | Hemi | Cross-sectional | | | Longitudinal | | |
|  |  | ICC | Lower bound | Upper bound | ICC | Lower bound | Upper bound |
| Hippocampal tail | L | 0.93 | 0.9 | 0.95 | 0.99 | 0.98 | 0.99 |
|  | R | 0.94 | 0.91 | 0.96 | 0.98 | 0.97 | 0.99 |
| Subiculum | L | 0.95 | 0.93 | 0.96 | 0.98 | 0.97 | 0.99 |
|  | R | 0.95 | 0.93 | 0.97 | 0.98 | 0.97 | 0.99 |
| CA1 | L | 0.95 | 0.93 | 0.97 | 0.99 | 0.98 | 0.99 |
|  | R | 0.97 | 0.96 | 0.98 | 0.99 | 0.98 | 0.99 |
| Hippocampal fissure | L | 0.86 | 0.8 | 0.9 | 0.9 | 0.86 | 0.93 |
|  | R | 0.88 | 0.83 | 0.91 | 0.92 | 0.89 | 0.94 |
| Presubiculum | L | 0.94 | 0.92 | 0.96 | 0.97 | 0.96 | 0.98 |
|  | R | 0.95 | 0.93 | 0.97 | 0.96 | 0.95 | 0.97 |
| Parasubiculum | L | 0.92 | 0.9 | 0.95 | 0.97 | 0.96 | 0.98 |
|  | R | 0.93 | 0.9 | 0.95 | 0.96 | 0.95 | 0.97 |
| Molecular Layer | L | 0.94 | 0.92 | 0.96 | 0.99 | 0.98 | 0.99 |
|  | R | 0.97 | 0.95 | 0.97 | 0.99 | 0.98 | 0.99 |
| GC-DG | L | 0.92 | 0.89 | 0.95 | 0.97 | 0.96 | 0.98 |
|  | R | 0.95 | 0.93 | 0.96 | 0.98 | 0.97 | 0.99 |
| CA3 | L | 0.93 | 0.9 | 0.95 | 0.97 | 0.96 | 0.98 |
|  | R | 0.95 | 0.93 | 0.97 | 0.98 | 0.98 | 0.99 |
| CA4 | L | 0.92 | 0.88 | 0.94 | 0.97 | 0.96 | 0.98 |
|  | R | 0.95 | 0.92 | 0.96 | 0.98 | 0.97 | 0.98 |
| Fimbria | L | 0.93 | 0.9 | 0.95 | 0.99 | 0.98 | 0.99 |
|  | R | 0.94 | 0.91 | 0.96 | 0.98 | 0.97 | 0.99 |
| HATA | L | 0.89 | 0.84 | 0.92 | 0.95 | 0.94 | 0.97 |
|  | R | 0.92 | 0.89 | 0.94 | 0.96 | 0.95 | 0.97 |
| Whole hippocampus | L | 0.95 | 0.93 | 0.97 | 0.99 | 0.99 | 0.99 |
|  | R | 0.97 | 0.96 | 0.98 | 0.99 | 0.99 | 0.99 |
| **Hemi,** hemisphere; **ICC,** intraclass correlation; **L,** left; **R,** right; **CA,** cornu ammonis; **GC-DG,** granule cell layer of dentate gyrus; **HATA,** hippocampal-amygdaloid transitional area, **N=141** | | | | | | | |

**Change in hippocampal subfield volumes and PTSD Symptoms**

As described in the main text of the manuscript methods, we examined the relationship of PVD (Equation 1) in hippocampal subfields across time (T1 – T3) and future CAPS-5 PTSD symptoms (T3). For this analysis, 139 participants had usable scans at T1 and T3 *and* completed the CAPS-5 at T3. Left and right hemispheres for each subfield were summed to yield a bilateral PVD measure. Thirteen (12 subfields + whole hippocampus) GLMs were run with CAPS-5 (T3) as the dependent variable, and bilateral PVD of a given hippocampal subfield (T1 – T3) as the independent variable while controlling for sex, age, and total brain volume PVD. Supplemental Table 4 depicts GLM results for all model terms for PVD measures calculated from the longitudinal processing stream in *FreeSurfer*, and Supplemental Table 5 depicts results from measures using the cross-sectional processing stream.

In neither the cross-sectional nor longitudinal stream version of the analysis, do hippocampal subfield PVD over time (T1 – T3) significantly relate to future PTSD symptoms (T3) after correction for multiple comparisons (all Holm-Bonferroni adjusted *ps* > .80; Holm, 1979).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Supplemental Table 4.** Hippocampal PVD from *longitudinal* processing stream (T1-T3) and future PTSD Symptoms (T3) | | | | | | | | |
| **Bilateral Subfield PVD (T1-T3)** | | **B** | ***ß*** | | **t** | | **p** | |
| (Intercept) | | 10.10 | -0.00 | | 2.66 | | **0.009** | |
| **Hippocampal Tail** | | 0.47 | 0.15 | | 1.73 | | 0.086 | |
| Sex | | 0.42 | 0.02 | | 0.23 | | 0.821 | |
| Age | | -0.01 | -0.01 | | -0.16 | | 0.872 | |
| Total brain volume PVD | | -0.58 | -0.04 | | -0.51 | | 0.611 | |
| (Intercept) | | 9.58 | -0.00 | | 2.54 | | **0.012** | |
| **Subiculum** | | 0.54 | 0.18 | | 2.03 | | **0.045\*** | |
| Sex | | 0.48 | 0.02 | | 0.26 | | 0.794 | |
| Age | | -0.00 | -0.00 | | -0.04 | | 0.968 | |
| Total brain volume PVD | | -0.93 | -0.07 | | -0.80 | | 0.424 | |
| (Intercept) | | 12.84 | 0.00 | | 3.46 | | **0.001** | |
| **CA1** | | 0.09 | 0.02 | | 0.26 | | 0.795 | |
| Sex | | 0.43 | 0.02 | | 0.23 | | 0.817 | |
| Age | | -0.03 | -0.04 | | -0.41 | | 0.685 | |
| Total brain volume PVD | | -0.53 | -0.04 | | -0.45 | | 0.651 | |
| (Intercept) | | 10.19 | 0.00 | | 2.87 | | **0.005** | |
| **Hippocampal Fissure** | | 0.19 | 0.20 | | 2.31 | | **0.023\*** | |
| Sex | | -0.07 | -0.00 | | -0.04 | | 0.968 | |
| Age | | -0.04 | -0.04 | | -0.46 | | 0.645 | |
| Total brain volume PVD | | -0.76 | -0.06 | | -0.66 | | 0.508 | |
| (Intercept) | | 13.15 | 0.00 | | 3.67 | | **<0.001** | |
| **Presubiculum** | | 0.02 | 0.01 | | 0.08 | | 0.940 | |
| Sex | | 0.41 | 0.02 | | 0.22 | | 0.827 | |
| Age | | -0.04 | -0.04 | | -0.42 | | 0.676 | |
| Total brain volume PVD | | -0.51 | -0.04 | | -0.43 | | 0.668 | |
| (Intercept) | | 11.66 | 0.00 | | 3.08 | | **0.003** | |
| **Parasubiculum** | | 0.13 | 0.08 | | 0.90 | | 0.370 | |
| Sex | | 0.53 | 0.02 | | 0.28 | | 0.777 | |
| Age | | -0.03 | -0.03 | | -0.31 | | 0.759 | |
| Total brain volume PVD | | -0.67 | -0.05 | | -0.57 | | 0.568 | |
| (Intercept) | | 13.00 | -0.00 | | 3.42 | | **0.001** | |
| **Molecular Layer** | | 0.06 | 0.01 | | 0.14 | | 0.888 | |
| Sex | | 0.43 | 0.02 | | 0.23 | | 0.818 | |
| Age | | -0.03 | -0.04 | | -0.40 | | 0.686 | |
| Total brain volume PVD | | -0.52 | -0.04 | | -0.44 | | 0.660 | |
| (Intercept) | | 16.26 | 0.00 | | 4.07 | | **<0.001** | |
| **GC-DG** | | -0.36 | -0.12 | | -1.38 | | 0.171 | |
| Sex | | 0.12 | 0.01 | | 0.06 | | 0.951 | |
| Age | | -0.06 | -0.06 | | -0.69 | | 0.494 | |
| Total brain volume PVD | | -0.43 | -0.03 | | -0.38 | | 0.707 | |
| (Intercept) | | 12.73 | 0.00 | | 3.24 | | **0.002** | |
| **CA3** | | 0.06 | 0.02 | | 0.25 | | 0.801 | |
| Sex | | 0.49 | 0.02 | | 0.26 | | 0.798 | |
| Age | | -0.03 | -0.03 | | -0.38 | | 0.703 | |
| Total brain volume PVD | | -0.50 | -0.04 | | -0.43 | | 0.668 | |
| (Intercept) | | 15.68 | 0.00 | | 4.05 | | **<0.001** | |
| **CA4** | | -0.28 | -0.11 | | -1.25 | | 0.214 | |
| Sex | | 0.28 | 0.01 | | 0.15 | | 0.879 | |
| Age | | -0.06 | -0.06 | | -0.64 | | 0.523 | |
| Total brain volume PVD | | -0.45 | -0.03 | | -0.39 | | 0.699 | |
| (Intercept) | | 10.10 | -0.00 | | 2.66 | | **0.009** | |
| **Fimbria** | | 0.47 | 0.15 | | 1.73 | | 0.086 | |
| Sex | | 0.42 | 0.02 | | 0.23 | | 0.821 | |
| Age | | -0.01 | -0.01 | | -0.16 | | 0.872 | |
| Total brain volume PVD | | -0.58 | -0.04 | | -0.51 | | 0.611 | |
| (Intercept) | | 11.30 | 0.00 | | 3.16 | | **0.002** | |
| **HATA** | | 0.22 | 0.13 | | 1.50 | | 0.137 | |
| Sex | | 0.73 | 0.03 | | 0.39 | | 0.698 | |
| Age | | -0.04 | -0.04 | | -0.42 | | 0.675 | |
| Total brain volume PVD | | -0.78 | -0.06 | | -0.67 | | 0.505 | |
| (Intercept) | | 12.28 | 0.00 | | 3.19 | | **0.002** | |
| **Whole hippocampus** | | 0.23 | 0.05 | | 0.51 | | 0.609 | |
| Sex | | 0.49 | 0.02 | | 0.26 | | 0.795 | |
| Age | | -0.03 | -0.03 | | -0.33 | | 0.743 | |
| Total brain volume PVD | | -0.55 | -0.04 | | -0.47 | | 0.637 | |
| *Note.* **\* p < .05 uncorrected**, **PVD**, percent volume difference, **CA,** cornu ammonis; **GC-DG,** granule cell layer of dentate gyrus; **HATA,** hippocampal-amygdaloid transitional area. **N = 139.** | | | | | | | | |
| **Supplemental Table 5.** Hippocampal PVD (T1-T3 from *cross-sectional* processing stream) and future PTSD Symptoms (T3) | | | | | | | | | |
| **Bilateral Subfield PVD (T1-T3)** | **B** | | | ***ß*** | | **t** | | **p** | |
| (Intercept) | 12.86 | | | 0.00 | | 3.98 | | **<0.001** | |
| **Hippocampal Tail** | 0.00 | | | 0.01 | | 0.04 | | 0.966 | |
| Sex | 0.45 | | | 0.02 | | 0.24 | | 0.813 | |
| Age | -0.04 | | | -0.04 | | -0.42 | | 0.674 | |
| Total brain volume PVD | -0.10 | | | -0.02 | | -0.16 | | 0.875 | |
| (Intercept) | 13.11 | | | 0.00 | | 3.86 | | **<0.001** | |
| **Subiculum** | -0.04 | | | -0.02 | | -0.21 | | 0.834 | |
| Sex | 0.42 | | | 0.02 | | 0.22 | | 0.825 | |
| Age | -0.04 | | | -0.04 | | -0.43 | | 0.670 | |
| Total brain volume PVD | -0.00 | | | -0.00 | | -0.01 | | 0.996 | |
| (Intercept) | 12.42 | | | 0.00 | | 3.65 | | **<0.001** | |
| **CA1** | 0.08 | | | 0.04 | | 0.41 | | 0.683 | |
| Sex | 0.53 | | | 0.02 | | 0.28 | | 0.781 | |
| Age | -0.04 | | | -0.04 | | -0.42 | | 0.676 | |
| Total brain volume PVD | -0.21 | | | -0.04 | | -0.40 | | 0.692 | |
| (Intercept) | 12.71 | | | 0.00 | | 3.55 | | **0.001** | |
| **Hippocampal Fissure** | 0.01 | | | 0.01 | | 0.11 | | 0.915 | |
| Sex | 0.43 | | | 0.02 | | 0.23 | | 0.818 | |
| Age | -0.04 | | | -0.04 | | -0.42 | | 0.677 | |
| Total brain volume PVD | -0.10 | | | -0.02 | | -0.22 | | 0.828 | |
| (Intercept) | 12.94 | | | -0.00 | | 3.89 | | **<0.001** | |
| **Presubiculum** | -0.01 | | | -0.01 | | -0.08 | | 0.939 | |
| Sex | 0.45 | | | 0.02 | | 0.24 | | 0.812 | |
| Age | -0.04 | | | -0.04 | | -0.42 | | 0.674 | |
| Total brain volume PVD | -0.05 | | | -0.01 | | -0.08 | | 0.933 | |
| (Intercept) | 13.70 | | | -0.00 | | 3.99 | | **<0.001** | |
| **Parasubiculum** | -0.07 | | | -0.07 | | -0.68 | | 0.496 | |
| Sex | 0.38 | | | 0.02 | | 0.20 | | 0.839 | |
| Age | -0.04 | | | -0.04 | | -0.42 | | 0.676 | |
| Total brain volume PVD | 0.12 | | | 0.02 | | 0.23 | | 0.815 | |
| (Intercept) | 13.27 | | | 0.00 | | 4.02 | | **<0.001** | |
| **Molecular Layer** | -0.10 | | | -0.07 | | -0.52 | | 0.601 | |
| Sex | 0.31 | | | 0.01 | | 0.16 | | 0.872 | |
| Age | -0.04 | | | -0.04 | | -0.42 | | 0.677 | |
| Total brain volume PVD | 0.17 | | | 0.03 | | 0.26 | | 0.796 | |
| (Intercept) | 13.82 | | | 0.00 | | 4.14 | | **<0.001** | |
| **GC-DG** | -0.15 | | | -0.12 | | -1.01 | | 0.317 | |
| Sex | 0.37 | | | 0.02 | | 0.20 | | 0.843 | |
| Age | -0.04 | | | -0.04 | | -0.46 | | 0.649 | |
| Total brain volume PVD | 0.31 | | | 0.06 | | 0.53 | | 0.597 | |
| (Intercept) | 12.59 | | | 0.00 | | 3.37 | | **0.001** | |
| **CA3** | 0.02 | | | 0.02 | | 0.15 | | 0.879 | |
| Sex | 0.49 | | | 0.02 | | 0.26 | | 0.798 | |
| Age | -0.03 | | | -0.03 | | -0.39 | | 0.694 | |
| Total brain volume PVD | -0.12 | | | -0.02 | | -0.24 | | 0.811 | |
| (Intercept) | 13.51 | | | 0.00 | | 4.02 | | **<0.001** | |
| **CA4** | -0.09 | | | -0.08 | | -0.65 | | 0.514 | |
| Sex | 0.38 | | | 0.02 | | 0.20 | | 0.840 | |
| Age | -0.04 | | | -0.04 | | -0.44 | | 0.659 | |
| Total brain volume PVD | 0.17 | | | 0.03 | | 0.29 | | 0.773 | |
| (Intercept) | 12.86 | | | 0.00 | | 3.98 | | **<0.001** | |
| **Fimbria** | 0.00 | | | 0.01 | | 0.04 | | 0.966 | |
| Sex | 0.45 | | | 0.02 | | 0.24 | | 0.813 | |
| Age | -0.04 | | | -0.04 | | -0.42 | | 0.674 | |
| Total brain volume PVD | -0.10 | | | -0.02 | | -0.16 | | 0.875 | |
| (Intercept) | 10.25 | | | 0.00 | | 2.81 | | **0.006** | |
| **HATA** | 0.16 | | | 0.14 | | 1.49 | | 0.137 | |
| Sex | 0.59 | | | 0.03 | | 0.32 | | 0.751 | |
| Age | -0.02 | | | -0.02 | | -0.25 | | 0.805 | |
| Total brain volume PVD | -0.32 | | | -0.06 | | -0.70 | | 0.482 | |
| (Intercept) | 12.94 | | | 0.00 | | 3.94 | | **<0.001** | |
| **Whole hippocampus** | -0.02 | | | -0.01 | | -0.10 | | 0.924 | |
| Sex | 0.44 | | | 0.02 | | 0.23 | | 0.816 | |
| Age | -0.04 | | | -0.04 | | -0.43 | | 0.670 | |
| Total brain volume PVD | -0.03 | | | -0.01 | | -0.05 | | 0.960 | |
| *Note.* **\* p < .05, uncorrected**, **PVD**, percent volume difference, **CA,** cornu ammonis; **GC-DG,** granule cell layer of dentate gyrus; **HATA,** hippocampal-amygdaloid transitional area. **N = 137.** | | | | | | | | | |

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