**Supporting Information**

**Methods S1**

*MRI processing details*

Images were transferred to a Mac OSX (Apple Inc., Cupertino, CA, U.S.A.) computer for processing with the FreeSurfer image analysis suite, which is documented and freely available for download online (http://surfer.nmr.mgh.harvard.edu/). FreeSurfer is a set of software tools for the study of cortical and subcortical anatomy. The T1 volumetric MRI scans were used for cortical reconstruction and volumetric segmentation. The technical details of these procedures are described in prior publications [1-8]. Briefly, this processing includes removal of nonbrain tissue using a hybrid watershed/surface deformation procedure [6], automated Tailarach transformation, segmentation of the subcortical white matter and deep gray matter volumetric structures (including hippocampus, amygdala, caudate, putamen, ventricles) [9, 10], intensity normalization [11], tessellation of the gray matter-white matter boundary, automated topology correction [4, 12], and surface deformation following intensity gradients to optimally place the grey-white and gray-cerebrospinal fluid (CSF) borders at the location where the greatest shift in intensity defines the transition to the other tissue class [1-3]

After establishment of the white matter and pial surfaces, voxel-wise measurements of cortical thickness, area, volume and curvature are generated. Thickness is calculated as the closest distance from the gray-white boundary to the grey-CSF boundary at each vertex on the tessellated surface [3]. Gyral and sulcal features are then used to delineate surface curvature. Comparison of surface measures across participants is possible after surface inflation [13], and registration to a spherical atlas, which uses individual cortical folding patterns to match cortical geometry across participants [14]. The spherical atlas naturally forms a coordinate system in which point-to-point correspondence between participants can be achieved. Mean thickness differences between groups can then be displayed on the pial surface of the standard atlas. An automated parcellation of the cerebral cortex into units based on gyral and sulcal structure [10, 15] results in 34 neuroanatomical regions per hemisphere (4 medial temporal, 5 lateral temporal, 11 frontal, 5 parietal, 4 occipital, and 4 cingulate). Average thickness, area and volume measures are produced for each of the parcellation regions of interest.

The data presented here were processed using the FreeSurfer version 5.1 default processing stream (recon-all –all). Data were visually inspected, and manual interventions were performed when the automated steps reported errors or failed quality assurance review. These included manual alignment to the Talairach template in cases where the automatic registration was wrong and adjustments to the watershed threshold to restore areas of the brain that were erroneously removed during skull stripping. If the automatic subcortical segmentation did not label voxels correctly, editing of the gray matter and white matter segmentation image was completed when defects were evident on routine visual inspection/quality control. Several of the Freesurfer programs use Talairach coordinates as seed points. In general, if the tissue segmentation or surfaces did not pass internal QA inspection the registration to the atlas was examined. The image was then manually aligned to the atlas and the processing was restarted. Gray matter edits can be performed if the subcortical segmentation does not label voxels correctly.

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