The following paragraphs describe the methods that were used on the different version(s) of the Chinese_56 Atlas.

Chinese_56 Atlas

Delineation of global brain features:
The length, width, height of whole brain and the AC-PC line length are important measurements of brain shape and size. For the 35 Chinese brains and their 35 Caucasian age- and gender-matched counterparts, we computed the global morphometrics using the BrainSuite software package (Shattuck and Leahy, 2002).

Delineation of brain structures:
For all 35 Chinese and 35 Caucasian brain MRI scans, 56 brain structures were automatically obtained (these include 50 cortical structures, 4 sub-cortical areas, the brainstem, and the cerebellum). This was achieved using the LONI BrainParser software (Tu et al., 2008)-a machine learning-based approach, which relies on a pre- trained model of common structures of interest. The BrainParser and LONI pipeline environment (Dinov et al., 2009), which contains the LONI BrainParser workflow, are available for downloading and include all necessary pre- and post-processing steps (http://www.loni.ucla. edu/Software/).

Template construction:
Using a modified LONI pipeline (Rex et al., 2003; Dinov et al., 2009) "AIR Make Atlas", we constructed the Chinese brain atlas (Chinese_56) composed of high resolution 3D structure MRI data from 56 normal Chinese subjects.

Comparison between Chinese brain template (Chinese_56) and ICBM152:
Both, the Chinese brain template (Chinese_56) and the ICBM152 were co-registered by aligning the AC-PC vector. Then the Chinese_56 template was linearly registered to the ICBM152 using a 6-parameter transformation to preserve its original characteristics in size and volume. Subsequently, the global features (length, width, height, AC-PC distance and ratios) of these two templates were measured.

Comparison of image registrations using different brain atlases:
In order to test the accuracy of registrations to different brain atlases, we aligned 7 new and distinct Chinese brain MRI volumes to the Chinese brain template (Chinese_56) and separately to the ICBM152 template. Both protocols used 6-parameter and 12-parameter transformations separately, and we performed the quantitative assessments of the global brain morphometry.