

Supplement 1

Correlations between FA and Age

Significant negative correlations were observed, across groups, between age and FA in CC3 ($r(38) = -.330, p = 0.043$), CC4 ($r(38) = -.413, p = 0.01$), CC5 ($r(38) = -.488, p = 0.002$) and CC6 ($r(38) = -.400, p = 0.013$). The magnitude of the correlation between age and FA in the SZ patients did not differ significantly from the magnitude of the age / FA correlation in the HC participants in any of these CC regions (CC3: $z = 0.56, p = 0.576$; CC4: $z = 0.64, p = 0.522$; CC5: $z = 0.37, p = 0.711$; CC6: $z = 0.74, p = 0.459$). No significant correlations were observed between participants' age and Mode in any of the 6 CC segments. Similarly, no significant correlations were observed between the SZ patients' duration-of-illness and either their FA or Mode in any of the 6 CC segments.

The statistically significant negative correlations observed (across groups) between age and FA replicates the results of several previous studies (1-3), and provides further evidence that FA, after increasing through adolescence and early adulthood (4), tends to decline through middle-age and beyond (1). It is as yet unclear whether the microstructural mechanisms responsible for these age-related FA reductions are the same mechanisms underlying the FA abnormalities that have consistently been observed in SZ patients. Uncovering the microstructural mechanisms of FA decline in normal aging is a worthwhile aim for future research which would have significant implications for the model of schizophrenia as a disorder of 'accelerated aging' (5).

Supplementary analyses of the positive correlation between FA and Reality Distortion

To ensure the robustness of the observed positive correlation between FA and Reality Distortion, we divided the SZ patients (on the basis of a median split) into those with 'severe' FA abnormalities ($n = 10$) and those with relatively 'mild' FA abnormalities in CC1, and compared the magnitude of the FA / Reality Distortion correlation in these two sub-groups. The magnitude of the FA / Reality Distortion correlation did not differ significantly between the two sub-groups ('severe': $r(10) = .554, p = 0.096$; 'mild': $r(9) = .516, p = 0.155$; 'severe' vs. 'mild': $z = 0.1, p = 0.920$), indicating that a positive correlation between FA and Reality Distortion was present in patients with both severe and mild CC abnormalities.

Correlations between FA / Mode and CPZ-equivalent medication dosage in the SZ patients

The correlation between patients' CPZ-equivalent medication dosage for FA in CC1 was $r(19) = -.100, p = 0.684$, and for Radial Diffusivity the correlation was $r(19) = -.089, p = 0.718$. The correlation between patients' CPZ-equivalent medication dosage and their Mode in CC4 was $r(19) = .059, p = 0.809$. There were no significant correlations between patients' CPZ-equivalent medication dosages and their FA, Mode, or Radial Diffusivity in any of the 6 CC segments.

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