**Supplementary table and figure legends**

**Table S1: Quality metrics**

Table S1 shows mean of quality metrics for the UHR individuals and the healthy controls as well as for the quality assessment groups defined by Roalf et al. 82

\*Participants from the Philadelphia Neurodevelopmental Cohort which is a community-based epidemiological sample.

**Table S2: Region of interest analysis quantifying mean FA, AD, MO, and RD in UHR and HCs in clusters found by PLS**

Table S2 shows mean FA, MO, RD (mm2/sec), and AD (mm2/sec) in the three largest reliable spatial regions with a positive correlation and the largest reliable spatial region with a negative correlation to the pattern in LV1. Comparisons between UHR individuals and HCs were done using an independent samples T-test.

**Figure S1: Univariate voxelwise analysis of white matter differences between UHR and healthy controls.**

Figure S1 shows clusters with significant (p<0.05) voxelwise differences in FA between UHR individuals and HCs. Clusters demonstrating significantly lower FA in UHR individuals than HCs are highlighted in red-yellow color. There were no significant voxelwise differences in MD, AD, MO, and RD. The brain is displayed according to radiological convention (participant’s left is to the right) and in axial slices. Clusters are enhanced using tbss\_fill (FSL version 5.09). Only clusters with cluster size≥25 voxels are displayed. Localization is performed using FSL. 1Local maxima in MNI coordinates (mm) are extracted from JHU WM tractography atlas. 2NA= not applicable.

**Figure S2: Univariate voxelwise analysis associating white matter to symptoms and level of functioning within UHR individuals**

Figure S2 displays clusters with significant (p<0.05) voxelvise correlations between DTI parameters and clinical measures. The only significant correlation was a positive correlation between SOFAS and FA, SOFAS and AD, and SOFAS and MO. Significant clusters showing this correlation are displayed in red-yellow color. The brain is displayed according to radiological convention (participant’s left is to the right) and in axial slices. Clusters are enhanced using tbss\_fill (FSL version 5.09). Only clusters with cluster size≥25 voxels are displayed. Localization is performed using FSL. 1Local maxima in MNI coordinates (mm) are extracted from JHU WM tractography atlas. 2NA= not applicable.

**Figure S3: Multivariate analysis of white matter differences between UHR who never had dependency or abuse of alcohol, tobacco, or drugs and healthy controls**

Figure S3 shows white matter differences between the subgroup of UHR individuals who never had dependency or abuse of alcohol, tobacco, or drugs and healthy controls. The panel to the left shows the pattern identified by LV1, in which UHR individuals have lower FA, AD, and MO concomitant with higher RD than healthy controls. In the panel to the right the most reliable spatial regions demonstrating this pattern (i.e. positive bootstrap-ratios) are highlighted in red-yellow color. Spatial regions demonstrating the inverse pattern (i.e. negative bootstrap ratios) are highlighted in blue color. Only clusters with bootstrap ratios greater than +/-1.96 and cluster size ≥25 voxels are shown 89. The brain is displayed according to radiological convention (participant’s left is to the right) and in axial slices. Clusters are enhanced using tbss\_fill (FSL version 5.09).

**Figure S4: Multivariate analysis of white matter differences between UHR who never took antipsychotics and healthy controls**

Figure S4 shows white matter differences between the subgroup of UHR individuals who never took antipsychotic medication and healthy controls. The panel to the left shows the pattern identified by LV1, in which UHR individuals have lower FA, AD, and MO concomitant with higher RD than healthy controls. In the panel to the right the most reliable spatial regions demonstrating this pattern (i.e. positive bootstrap-ratios) are highlighted in red-yellow color. Spatial regions demonstrating the inverse pattern (i.e. negative bootstrap ratios) are highlighted in blue color. Only clusters with bootstrap ratios greater than +/-1.96 and cluster size ≥25 voxels are shown 89. The brain is displayed according to radiological convention (participant’s left is to the right) and in axial slices. Clusters are enhanced using tbss\_fill (FSL version 5.09).

**Figure S5: Multivariate analysis of white matter differences between UHR who do not take antidepressants and healthy controls**

Figure S5 shows white matter differences between the subgroup of UHR individuals who do not take antidepressant medication and healthy controls. The panel to the left shows the pattern identified by LV1, in which UHR individuals have lower FA, AD, and MO concomitant with higher RD than healthy controls. In the panel to the right the most reliable spatial regions demonstrating this pattern (i.e. positive bootstrap-ratios) are highlighted in red-yellow color. Spatial regions demonstrating the inverse pattern (i.e. negative bootstrap ratios) are highlighted in blue color. Only clusters with bootstrap ratios greater than +/-1.96 and cluster size ≥25 voxels are shown 89. The brain is displayed according to radiological convention (participant’s left is to the right) and in axial slices. Clusters are enhanced using tbss\_fill (FSL version 5.09).