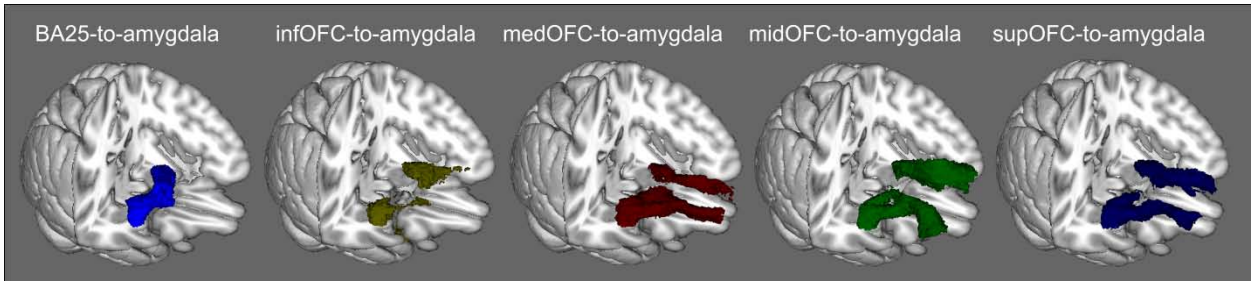

Fig. S1. Probabilistic tractography tracts between the prefrontal cortex and amygdala. Subgenual anterior cingulate cortex (BA25); inferior orbtofrontal cortex (infOFC); medial orbitofrontal cortex (medOFC); middle orbitofrontal cortex (midOFC); superior orbitofrontal cortex (supOFC). Demonstrated tracts have been error thresholded.

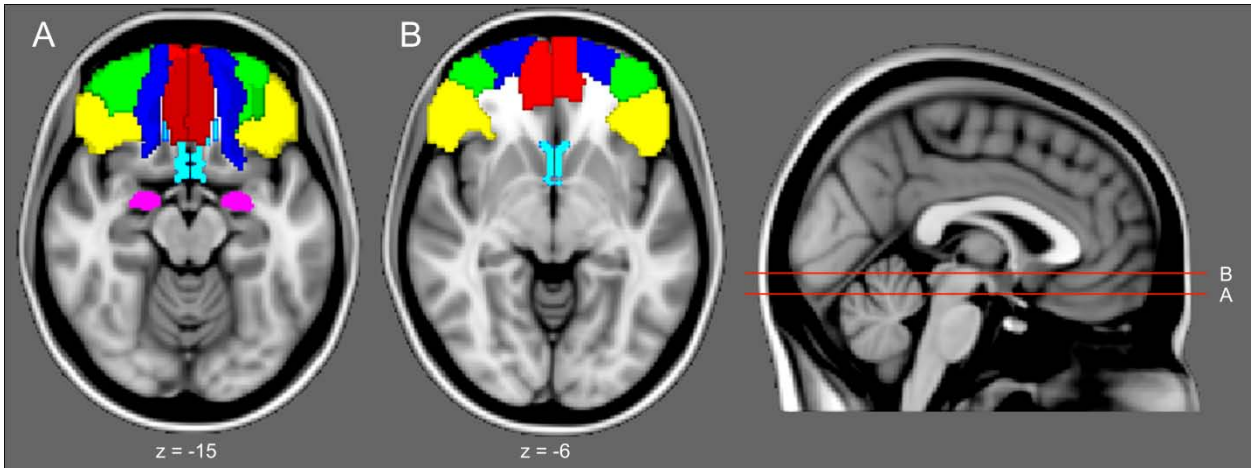

Fig. S2. Axial images show anatomical seed masks used for probabilistic fiber tractography: amygdala = pink; subgenual anterior cingulate cortex (BA25) = light blue; inferior orbitofrontal cortex (infOFC) = yellow; medial orbitofrontal cortex (medOFC) = red; middle orbitofrontal cortex (midOFC) = green; superior orbitofrontal cortex (supOFC) = dark blue.

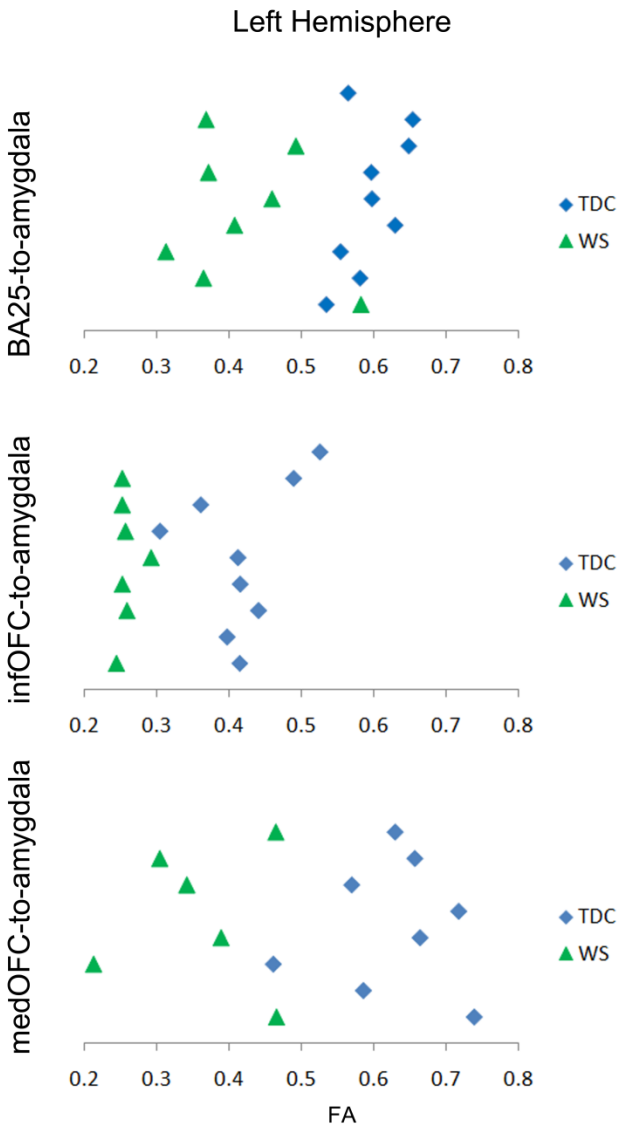

Fig. S3. Dotplots show mean individual fractional anisotropy (FA) values within significant clusters in left hemisphere prefrontal-amygdala tracts. Individuals with Williams Syndrome (WS) have lower FA values than typically-developing controls (TDC). Subgenual anterior cingulate (BA25); inferior orbitofrontal cortex (infOFC); medial orbitofrontal cortex (medOFC).

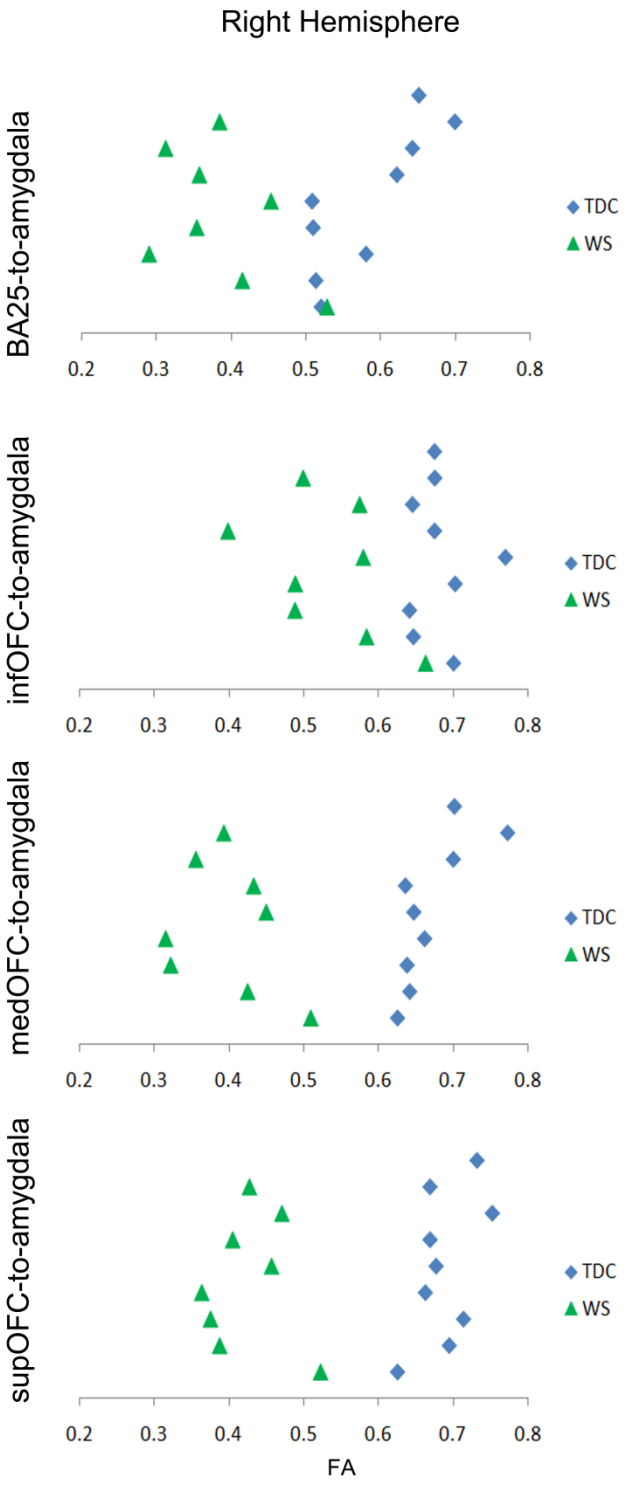

Fig. S4. Dotplots show mean individual fractional anisotropy (FA) values within significant clusters in right hemisphere prefrontal-amygdala tracts. Individuals with Williams Syndrome (WS) have lower FA values than typically-developing controls (TDC). Subgenual anterior cingulate (BA25); inferior orbitofrontal cortex (infOFC); medial orbitofrontal cortex (medOFC); superior orbitofrontal cortex (supOFC).

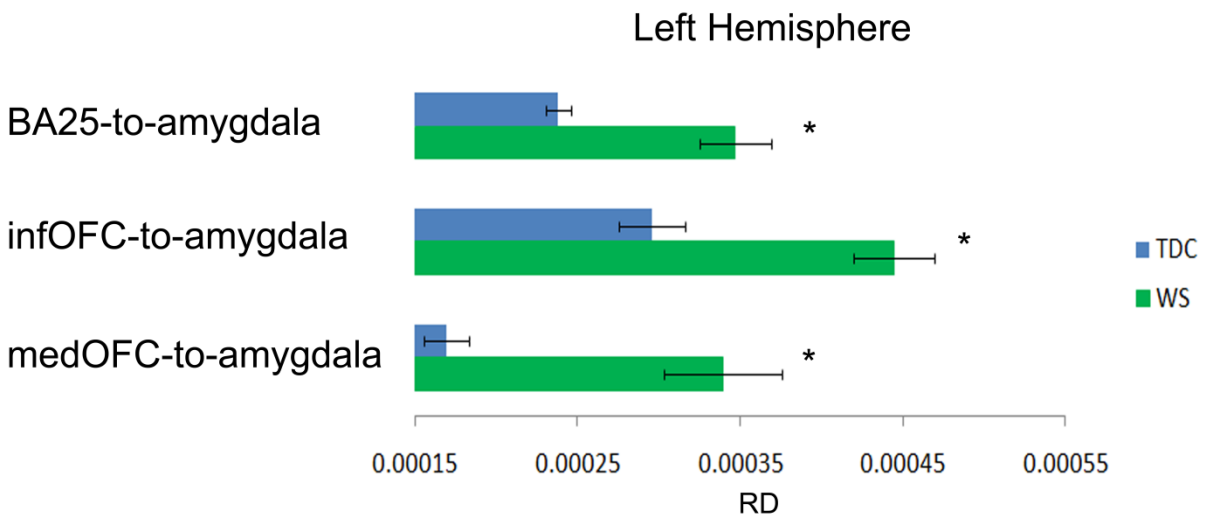

Fig. S5. Bar graph represents mean radial diffusivity (RD) values. RD values are extracted from left hemisphere prefrontal-amygdala white matter clusters where individuals with Williams Syndrome (WS) demonstrate significantly lower fractional anisotropy (FA) values than typically-developing controls (TDC). Lower FA values in individuals with WS, compared to TDC, are driven by higher RD in prefrontal-amygdala white matter tracts. Subgenual anterior cingulate (BA25); inferior orbitofrontal cortex (infOFC); medial orbitofrontal cortex (medOFC). Significant results ($p < .05$) are marked with an asterisk (*).

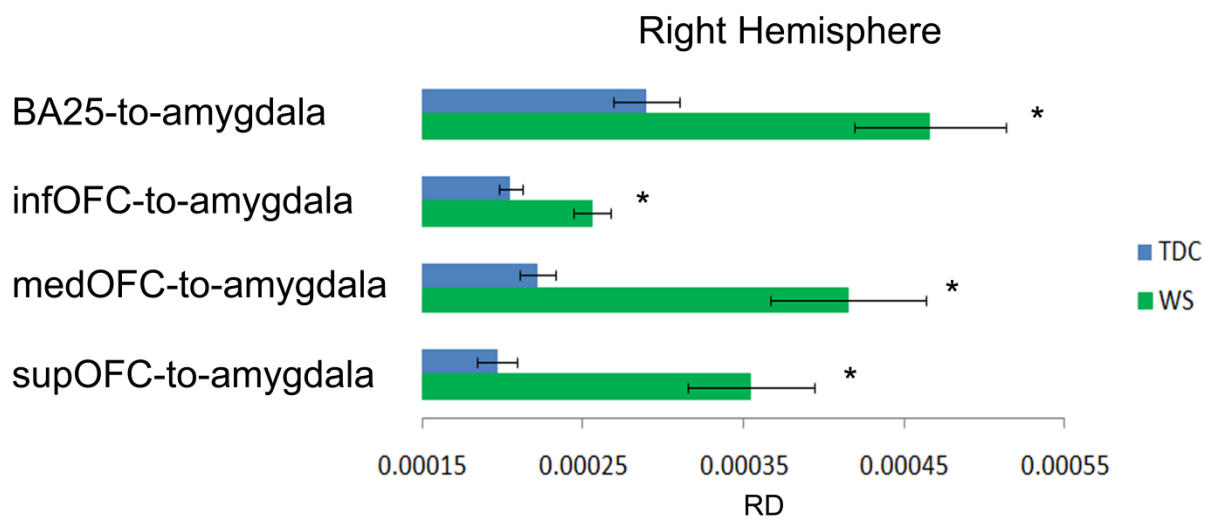

Fig. S6. Bar graph represents mean radial diffusivity (RD) values. RD values are extracted from right hemisphere prefrontal-amygdala white matter clusters where individuals with Williams Syndrome (WS) demonstrate significantly lower fractional anisotropy (FA) values than typically-developing controls (TDC). Lower FA values in individuals with WS, compared to TDC, are driven by higher RD in prefrontal-amygdala white matter tracts. Subgenual anterior cingulate (BA25); inferior orbitofrontal cortex (infOFC); medial orbitofrontal cortex (medOFC); superior orbitofrontal cortex (supOFC). Significant results ($p < .05$) are marked with an asterisk (*).

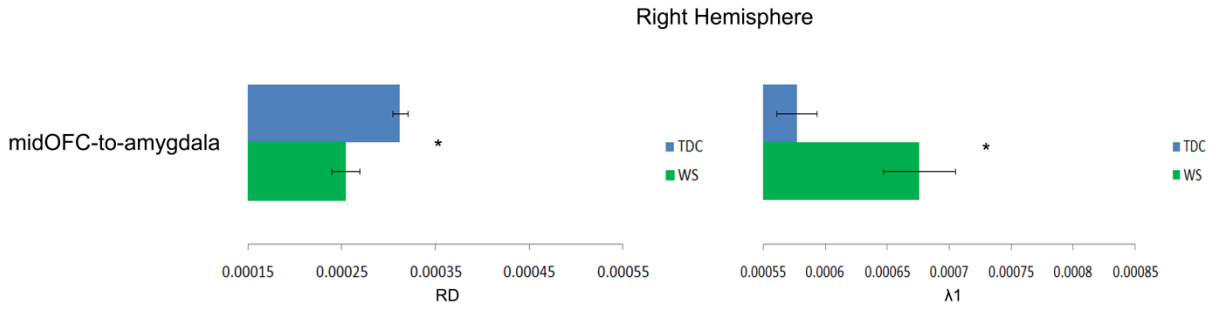

Fig. S7. Bar graphs represent mean radial diffusivity (RD) and parallel diffusivity (λ1) values. RD and λ1 values are extracted from prefrontal-amygdala white matter clusters where individuals with Williams Syndrome (WS) demonstrate higher fractional anisotropy (FA) values than typically-developing controls (TDC). Higher FA values in individuals with WS, compared to TDC, are driven by significantly lower RD and higher λ1 in prefrontal-amygdala white matter tracts. Middle orbitofrontal cortex (midOFC). Significant results ($p < .05$) are marked with an asterisk (*).

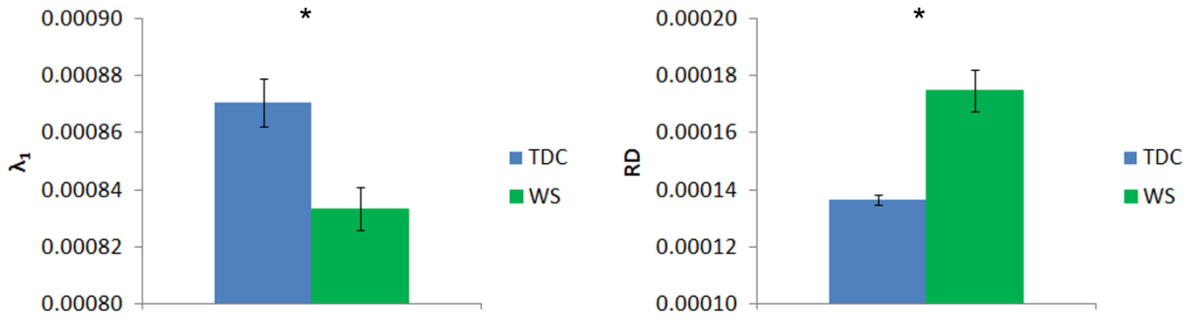

Fig. S8. Bar graphs represent mean parallel diffusivity (λ_1) and radial diffusivity (RD) values. λ_1 and RD values are extracted from whole-brain TBSS voxels where individuals with Williams Syndrome (WS) demonstrate significantly lower fractional anisotropy (FA) values than typically-developing controls (TDC). Lower whole-brain FA values in individuals with WS, compared to TDC, are the result of both lower mean λ_1 and higher mean RD in individuals with WS. Significant between-group differences ($p < .05$) are marked with an asterisk (*).

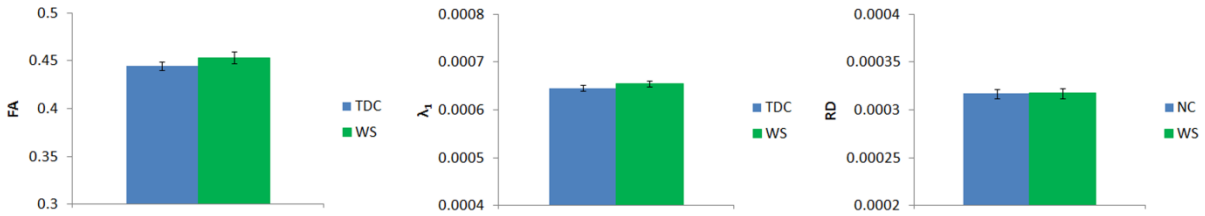

Fig. S9. Bar graphs represent mean fractional anisotropy (FA), parallel diffusivity (λ_1), and radial diffusivity (RD) values across global white matter. When all white matter is considered, rather than the center of each tract, individuals with Williams Syndrome (WS) and typically-developing controls (TDC) show similar diffusion characteristics.