

Figure 1 (a). The frequency bar graph showing the number of subjects categorized by Fazekas scores; **(b).** The scatterplot showing the association of Fazekas scores and white matter hyperintensities volume (ml), $r = 0.75$, $p < 0.001$,

Table 1 Group comparisons of Atlas-based tracts

White Matter Tracts	FAZEKAS						Mean	SD
	1vs0	2vs0	3vs0	4vs0	5vs0	6vs0		
Anterior corona radiata R	-	-	0.001 ^a	<0.001 ^a	<0.001 ^a	<0.001 ^a	0.376	.002
Anterior corona radiata L	-	-	0.001 ^a	<0.001 ^a	<0.001 ^a	<0.001 ^a	0.373	.001
Posterior thalamic radiation R	-	-	0.007	<0.001 ^a	<0.001 ^a	<0.001 ^a	0.507	.002
Superior fronto-occipital fasciculus L	-	-	0.001 ^a	<0.001 ^a	<0.001 ^a	<0.001 ^a	0.370	.003
Middle cerebellar peduncle	-	-	-	<0.001 ^a	0.001 ^a	<0.001 ^a	0.396	.000
Genu of corpus callosum	-	-	-	<0.001 ^a	0.001 ^a	<0.001 ^a	0.512	.001
Body of corpus callosum	-	-	-	<0.001 ^a	0.01 ^a	<0.001 ^a	0.557	.001
Splenium of corpus callosum	-	-	-	<0.001 ^a	<0.001 ^a	<0.001 ^a	0.672	.001
Anterior limb of internal capsule R	-	-	-	<0.001 ^a	<0.001 ^a	<0.001 ^a	0.478	.001
Anterior limb of internal capsule L	-	-	-	<0.001 ^a	<0.001 ^a	<0.001 ^a	0.477	.001
Retrolenticular part of internal capsule R	-	-	-	<0.001 ^a	0.008 ^a	<0.001 ^a	0.507	.001
Retrolenticular part of internal capsule L	-	-	-	<0.001 ^a	0.002 ^a	<0.001 ^a	0.524	.001
Superior corona radiata R	-	-	-	0.004 ^a	0.005 ^a	<0.001 ^a	0.425	.001
Superior corona radiata L	-	-	-	0.007 ^a	0.001 ^a	<0.001 ^a	0.429	.001
Posterior corona radiata R	-	-	-	<0.001 ^a	<0.001 ^a	<0.001 ^a	0.422	.001
Posterior corona radiata L	-	-	-	<0.001 ^a	<0.001 ^a	<0.001 ^a	0.408	.001
Posterior thalamic radiation L	-	-	-	<0.001 ^a	<0.001 ^a	<0.001 ^a	0.498	.002
Sagittal stratum R	-	-	-	<0.001 ^a	0.002 ^a	<0.001 ^a	0.458	.001
Sagittal stratum L	-	-	-	<0.001 ^a	0.035	<0.001 ^a	0.432	.001
External capsule R	-	-	-	<0.001 ^a	<0.001 ^a	<0.001 ^a	0.347	.000
External capsule L	-	-	-	0.036	0.009 ^a	0.019 ^a	0.359	.000
Fornix (cres) / Stria terminalis L	-	-	-	0.009 ^a	0.011 ^a	<0.001 ^a	0.442	.001
Superior longitudinal fasciculus R	-	-	-	<0.001 ^a	<0.001 ^a	<0.001 ^a	0.417	.001

Superior longitudinal fasciculus L	-	-	-	<0.001 ^a	<0.001 ^a	<0.001 ^a	0.419	.001
Superior fronto-occipital fasciculus R	-	-	-	<0.001 ^a	<0.001 ^a	<0.001 ^a	0.390	.002
Uncinate fasciculus L	-	-	-	0.006 ^a	0.036	0.003 ^a	0.408	.001
Tapetum R	-	-	-	<0.001 ^a	<0.001 ^a	<0.001 ^a	0.344	.002
Tapetum L	-	-	-	0.006 ^a	<0.001 ^a	<0.001 ^a	0.260	.001
Uncinate fasciculus R	-	-	-	0.014 ^a	-	<0.001 ^a	0.416	.001
Cerebral peduncle R	-	-	-	0.006 ^a	-	0.001 ^a	0.579	.001
Cerebral peduncle L	-	-	-	0.001 ^a	-	0.007 ^a	0.581	.001
Posterior limb of internal capsule R	-	-	-	0.045	-	<0.001 ^a	0.565	.001
Posterior limb of internal capsule L	-	-	-	0.039	-	<0.001 ^a	0.572	.001
Superior cerebellar peduncle L	-	-	-	0.044	-	<0.001 ^a	0.496	.001
Fornix (cres) / Stria terminalis R	-	-	-	0.004 ^a	-	<0.001 ^a	0.405	.002
Medial lemniscus R	-	-	-	-	-	0.04 ^a	0.531	.001
Medial lemniscus L	-	-	-	-	-	0.015 ^a	0.531	.001
Inferior cerebellar peduncle R	-	-	-	-	-	0.014 ^a	0.340	.001
Inferior cerebellar peduncle L	-	-	-	-	-	0.003 ^a	0.339	.000
Superior cerebellar peduncle R	-	-	-	-	-	<0.001 ^a	0.521	.001
Cingulum (cingulate gyrus) L	-	-	-	-	-	<0.001 ^a	0.458	.001
Pontine crossing tract (a part of MCP)	-	-	-	-	-	-	0.398	.001
Fornix (column and body of fornix)	-	-	-	-	-	-	0.285	.005
Corticospinal tract R	-	-	-	-	-	-	0.407	.001
Corticospinal tract L	-	-	-	-	-	-	0.415	.001
Cingulum (cingulate gyrus) R	-	-	-	-	-	-	0.425	.001
Cingulum (hippocampus) R	-	-	-	-	-	-	0.345	.001
Cingulum (hippocampus) L	-	-	-	-	-	-	0.342	.001

-: $p > 0.05$, all significant differences are presented with p value.

a: represent the results that are still significant after FDR $q < 0.05$ correction for multiple comparisons.

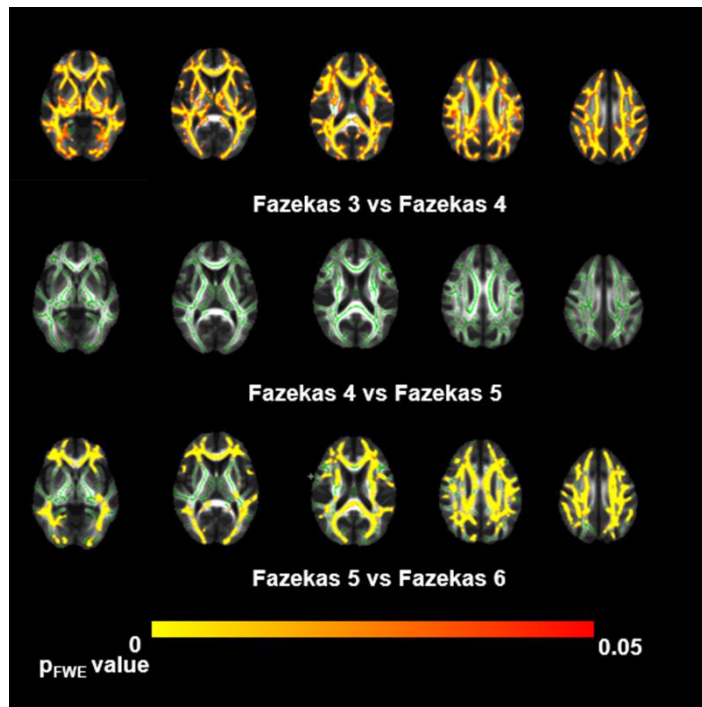


Figure 2 Tract-based spatial statistics results between white matter hyperintensities groups. A TBSS-derived t-map of decreased fractional anisotropy (FA) in the moderate to severe (Fazekas 3 to 6) the regions showed significant changes were shown in red-yellow ($p < 0.05$; corrected for family-wise error).