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Brain Structure and joint hypermobility: relevance to the expression of psychiatric symptoms. Eccles et al, British Journal of Psychiatry

Fig. DS1 Scatter plots demonstrating grey matter volume correlations with degree of hypermobility (Beighton score) (a) Left lateral occipital volumes are positively correlated (r^2 0.229) with degree of hypermobility. Degree of hypermobility is negatively correlated with the volume of the following grey matter regions; (b) right superior temporal gyrus (r^2 0.434), (c) right inferior parietal lobe (r^2 0.406), (d) left inferior parietal lobe (r^2 0.404).

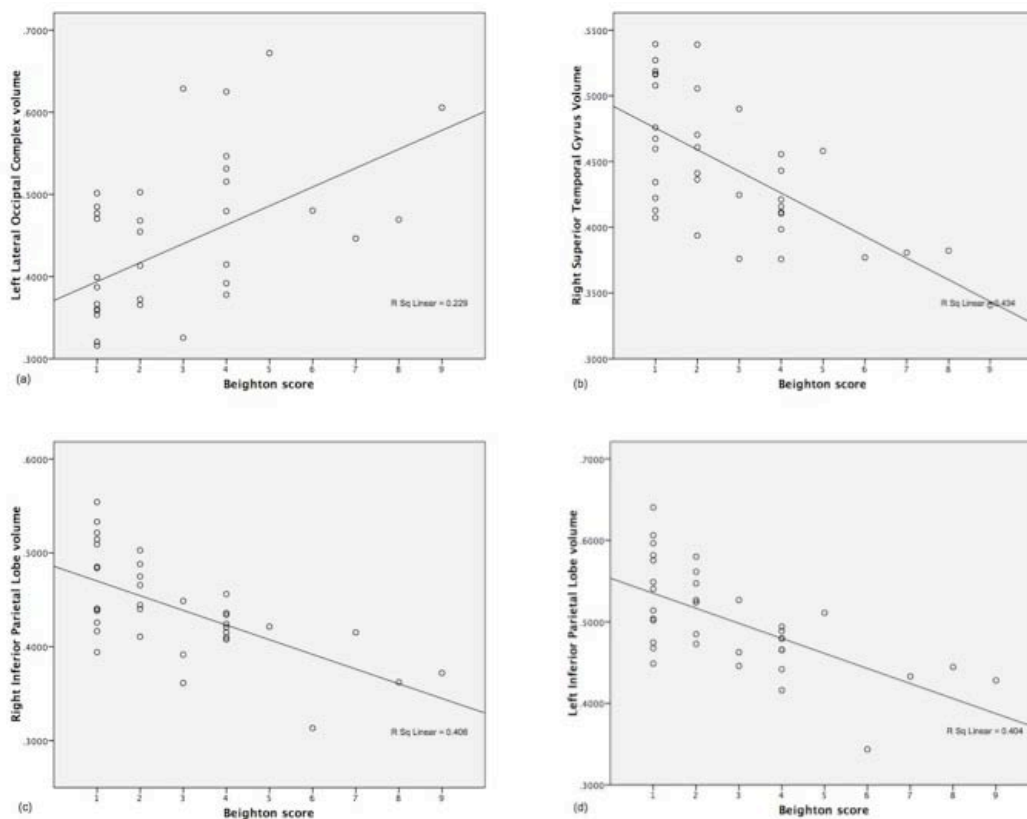


Table DS1 Characteristics of study subjects (n=72). There were no significant associations between hypermobility status age, sex or handedness.

| | Overall | | No hypermobility | | Hypermobility | |
|-------------------|--------------|-------------|------------------|-------------|---------------|-------------|
| | <i>Range</i> | <i>Mean</i> | <i>Range</i> | <i>Mean</i> | <i>Range</i> | <i>Mean</i> |
| Age | 19 - 54 | 29.31 | 19-54 | 29.9 | 19 - 50 | 28.7 |
| | <i>n</i> | <i>%</i> | <i>n</i> | <i>%</i> | <i>n</i> | <i>%</i> |
| Sex | | | | | | |
| Male | 27 | 37.5% | 17 | 47.2% | 10 | 27.8% |
| Female | 45 | 62.5% | 19 | 52.8% | 26 | 72.2% |
| Handedness | | | | | | |
| Right | 65 | 90.3% | 31 | 86.1% | 34 | 94.4% |
| Left | 7 | 9.7% | 5 | 13.9% | 2 | 5.6% |

Table DS2 Regional differences in grey matter volumes by hypermobility group and by correlation with degree of hypermobility (Beighton score). Statistical threshold $p < 0.001$ uncorrected; extent threshold 10 contiguous voxels.

| <i>Region</i> | <i>Co-ordinates</i> | <i>Cluster size (# voxels)</i> | <i>Z Value of peak</i> |
|--|---------------------|------------------------------------|------------------------|
| <i>Grey matter regions of group difference</i> | | | |
| <u><i>Hypermobile > non-hypermobile</i></u> | | | |
| <i>R Amygdala</i> | <i>22, -5, -20</i> | <i>1180</i> | <i>3.77</i> |
| <i>L Amygdala</i> | <i>-27, -6, -21</i> | <i>406</i> | <i>3.64</i> |
| <i>SMA</i> | <i>-6, -3, -61</i> | <i>234</i> | <i>3.68</i> |
| <i>Motor cortex</i> | <i>41, -14, 58</i> | <i>208</i> | <i>3.59</i> |
| <u><i>Non hypermobile > hypermobile</i></u> | | | |
| <i>R Anterior cingulate cortex</i> | <i>13, 33, 27</i> | <i>55</i> | <i>3.93</i> |
| <i>L Parietal cortex</i> | <i>-16, -53, 55</i> | <i>215</i> | <i>3.92</i> |
| <i>Grey matter regions correlated with Beighton score</i> | | | |
| <u><i>positive correlation</i></u> | | | |
| <i>L lateral occipital complex</i> | <i>-23, -85, 1</i> | <i>494</i> | <i>4.6</i> |
| <u><i>negative correlation</i></u> | | | |
| <i>R superior temporal gyrus</i> | <i>66, -6, 1</i> | <i>5008</i> | <i>5.16</i> |
| <i>R inferior parietal region</i> | <i>59, -33, 32</i> | <i>1424</i> | <i>4.27</i> |
| <i>L inferior parietal region</i> | <i>-46, -44 45</i> | <i>1102</i> | <i>4.21</i> |