LOC Structural

```
knitr::opts_chunk$set(tidy = TRUE, tidy.opts = list(comment = FALSE), echo = TRUE, fig.width=6, fig.hei
```

Participant Characteristics

Table 1: Demographics

Characteristic	Overall N = 143	LOC Groups No, N = 106	LOC Groups Yes, N = 37
Sex			
Female	73 (51%)	52 (49%)	21 (57%)
Male	70 (49%)	54 (51%)	16 (43%)
Age, yr	8.9 (1.3)	9.0 (1.3)	8.7 (1.3)
BMI	17.5 (3.5)	17.1 (3.1)	18.6 (4.3)
BMI Percentile	55.3 (28.2)	51.4 (27.8)	66.3 (27.0)
BMI Z-score	0.2 (1.0)	0.1 (0.9)	0.6 (1.0)
bmi_class			
HW	113 (79%)	87 (82%)	26 (70%)
OB	14 (9.8%)	8 (7.5%)	6 (16%)
OW	16 (11%)	11 (10%)	5 (14%)
Ethnicity			
HL	2 (1.6%)	1 (1.1%)	1 (2.9%)
NotHL	123 (98%)	89 (99%)	34 (97%)
Unknown	18	16	2
Race			
Asian	4 (2.8%)	4 (3.8%)	0 (0%)
Black	4 (2.8%)	1 (0.9%)	3 (8.1%)
White	135 (94%)	101 (95%)	34 (92%)
Mother's Education			
<BA	38 (28%)	25 (25%)	13 (35%)
>BA	48 (35%)	37 (37%)	11 (30%)
BA	51 (37%)	38 (38%)	13 (35%)
Unknown	6	6	0
Income			
<$51,000	25 (18%)	15 (14%)	10 (28%)
>$100,000	51 (36%)	43 (41%)	8 (22%)
$51,000-$100,000	64 (46%)	46 (44%)	18 (50%)
Unknown	3	2	1
Total Intercranial Volume	1,517.6 (117.9)	1,522.4 (117.4)	1,504.0 (119.8)
IQR	82.1 (1.1)	82.1 (1.0)	82.1 (1.3)

[1] n (%); Mean (SD)

```
    Welch Two Sample t-test

data:  age_yr by loc1
```

```
t = 1.1263, df = 63.747, p-value = 0.2643
alternative hypothesis: true difference in means between group No and group Yes is not equal to 0
95 percent confidence interval:
 -0.2162339  0.7751168
sample estimates:
 mean in group No mean in group Yes
         8.960823          8.681381
```

```
      No      Yes
1.314100 1.294109
```

```
    Welch Two Sample t-test

data:  bmi by loc1
t = -1.9761, df = 49.117, p-value = 0.05378
alternative hypothesis: true difference in means between group No and group Yes is not equal to 0
95 percent confidence interval:
 -3.0864301  0.0258582
sample estimates:
 mean in group No mean in group Yes
         17.08803          18.61831
```

```
      No      Yes
3.070295 4.347288
```

```
    Welch Two Sample t-test

data:  bmi_p by loc1
t = -2.86, df = 64.576, p-value = 0.0057
alternative hypothesis: true difference in means between group No and group Yes is not equal to 0
95 percent confidence interval:
 -25.209498  -4.476882
sample estimates:
 mean in group No mean in group Yes
         51.42519          66.26838
```

```
      No      Yes
27.78142 26.96677
```

```
    Welch Two Sample t-test

data:  bmi_z by loc1
t = -2.8953, df = 59.891, p-value = 0.005279
alternative hypothesis: true difference in means between group No and group Yes is not equal to 0
```

```
95 percent confidence interval:
 -0.9096446 -0.1662823
sample estimates:
 mean in group No mean in group Yes
       0.08745459        0.62541807
```

```
       No       Yes
0.9317736 0.9870819
```

```
    Pearson's Chi-squared test with Yates' continuity correction

data:  xtabs(~sex + loc1, data = loc_dat)
X-squared = 0.3791, df = 1, p-value = 0.5381
```

```
    Fisher's Exact Test for Count Data

data:  xtabs(~race + loc1, data = loc_dat)
p-value = 0.06192
alternative hypothesis: two.sided
```

```
    Fisher's Exact Test for Count Data

data:  xtabs(~ethnicity + loc1, data = loc_dat)
p-value = 0.4832
alternative hypothesis: true odds ratio is not equal to 1
95 percent confidence interval:
  0.004822008 30.861981270
sample estimates:
odds ratio
 0.3854397
```

```
    Pearson's Chi-squared test

data:  xtabs(~income + loc1, data = loc_dat)
X-squared = 5.5505, df = 2, p-value = 0.06233
```

```
    Pearson's Chi-squared test
```

```
data:  xtabs(~mom_ed + loc1, data = loc_dat)
X-squared = 1.4672, df = 2, p-value = 0.4802
```

MRI quality

```
          age_yr bmi_p  tiv    iqr_ratio
age_yr    ""     ""     ""     ""
bmi_p     "0.35" ""     ""     ""
tiv       "0.08" "0.14" ""     ""
iqr_ratio "0.11" "0.03" "0.08" ""
```

```
    Welch Two Sample t-test

data:  tiv by loc1
t = 0.808, df = 61.82, p-value = 0.4222
alternative hypothesis: true difference in means between group No and group Yes is not equal to 0
95 percent confidence interval:
 -27.11040  63.89191
sample estimates:
 mean in group No mean in group Yes
         1522.381          1503.990
```

```
      No      Yes
117.4500 119.8049
```

```
    Welch Two Sample t-test

data:  iqr_ratio by loc1
t = -0.28381, df = 53.994, p-value = 0.7776
alternative hypothesis: true difference in means between group No and group Yes is not equal to 0
95 percent confidence interval:
 -0.5306559  0.3990496
sample estimates:
 mean in group No mean in group Yes
         82.07717          82.14297
```

```
      No      Yes
1.043734 1.268398
```

```
    Welch Two Sample t-test

data:  tiv by sex
t = -6.1111, df = 141, p-value = 9.144e-09
alternative hypothesis: true difference in means between group Female and group Male is not equal to 0
95 percent confidence interval:
 -142.25682  -72.71435
sample estimates:
```

```
mean in group Female   mean in group Male
            1465.007             1572.493

  Female     Male
107.4596 102.8681



    Welch Two Sample t-test

data:  iqr_ratio by sex
t = 0.10362, df = 140.76, p-value = 0.9176
alternative hypothesis: true difference in means between group Female and group Male is not equal to 0
95 percent confidence interval:
 -0.3459219  0.3841880
sample estimates:
mean in group Female   mean in group Male
            82.10356             82.08443

  Female     Male
1.150069 1.057596
```

Matched Sample

Table 2: Demographics - Matched Subset

	Overall	LOC Groups	
Characteristic	N = 74	No, N = 37	Yes, N = 37
Sex			
Female	43 (58%)	22 (59%)	21 (57%)
Male	31 (42%)	15 (41%)	16 (43%)
Age, yr	8.6 (1.3)	8.6 (1.2)	8.7 (1.3)
BMI	18.0 (4.0)	17.4 (3.7)	18.6 (4.3)
BMI Percentile	60.7 (28.3)	55.2 (28.8)	66.3 (27.0)
BMI Z-score	-0.2 (0.7)	-0.3 (0.7)	0.0 (0.7)
Unknown	50	24	26
bmi_class			
HW	53 (72%)	27 (73%)	26 (70%)
OB	10 (14%)	4 (11%)	6 (16%)
OW	11 (15%)	6 (16%)	5 (14%)
Ethnicity			
HL	1 (1.5%)	0 (0%)	1 (2.9%)
NotHL	65 (98%)	31 (100%)	34 (97%)
Unknown	8	6	2
Race			
Asian	2 (2.7%)	2 (5.4%)	0 (0%)
Black	3 (4.1%)	0 (0%)	3 (8.1%)
White	69 (93%)	35 (95%)	34 (92%)
Mother's Education			
<BA	20 (27%)	7 (19%)	13 (35%)
>BA	27 (36%)	16 (43%)	11 (30%)
BA	27 (36%)	14 (38%)	13 (35%)
Income			
<$51,000	16 (22%)	6 (17%)	10 (28%)
>$100,000	24 (33%)	16 (44%)	8 (22%)
$51,000-$100,000	32 (44%)	14 (39%)	18 (50%)
Unknown	2	1	1
Total Intercranial Volume	1,513.5 (114.8)	1,523.0 (110.5)	1,504.0 (119.8)
IQR	82.1 (1.2)	82.1 (1.1)	82.1 (1.3)

[1] n (%); Mean (SD)

Table 3: Grey Matter Volume - OFC

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	-0.494	0.391	-1.263	0.212
loc1Yes	0.097	0.045	2.146	0.036
tiv	0.002	0.000	7.919	0.000
age_yr	-0.010	0.021	-0.502	0.617
sexMale	0.023	0.058	0.397	0.692
bmi_hw_dummy	0.159	0.058	2.752	0.008
study_dummy	-0.009	0.024	-0.393	0.696

Table 4: Grey Matter Volume - Parahippocampal Gyrus

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	0.452	0.403	1.120	0.267
loc1Yes	-0.116	0.047	-2.497	0.015
tiv	0.002	0.000	6.352	0.000
age_yr	0.015	0.021	0.725	0.472
sexMale	0.112	0.060	1.868	0.067
bmi_hw_dummy	0.111	0.060	1.865	0.067
study_dummy	0.054	0.025	2.199	0.032

Table 5: Grey Matter Volume - Cerebellum Lobule IV

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	4.143	1.256	3.298	0.002
loc1Yes	-0.132	0.145	-0.913	0.365
tiv	0.003	0.001	3.378	0.001
age_yr	-0.056	0.066	-0.840	0.404
sexMale	0.059	0.186	0.319	0.751
bmi_hw_dummy	0.081	0.186	0.436	0.664
study_dummy	-0.047	0.077	-0.606	0.547

Table 6: Grey Matter Volume - CA4

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	0.112	0.098	1.149	0.255
loc1Yes	-0.031	0.011	-2.797	0.007
tiv	0.000	0.000	5.631	0.000
age_yr	0.007	0.005	1.359	0.179
sexMale	0.009	0.014	0.591	0.556
bmi_hw_dummy	0.015	0.014	1.039	0.303
study_dummy	0.002	0.006	0.320	0.750

Table 7: Sulci Depth - ACC

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	2.017	0.218	9.247	0.000
loc1Yes	0.115	0.043	2.703	0.009
age_yr	0.015	0.020	0.779	0.439
sexMale	0.074	0.044	1.687	0.097
bmi_hw_dummy	0.082	0.054	1.526	0.132
study_dummy	0.029	0.022	1.312	0.194

Table 8: Sulci Depth - Cuneus

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	2.701	0.236	11.447	0.000
loc1Yes	0.047	0.046	1.021	0.311
age_yr	-0.028	0.021	-1.326	0.190
sexMale	0.047	0.047	0.989	0.326
bmi_hw_dummy	-0.043	0.058	-0.742	0.461
study_dummy	0.025	0.024	1.025	0.310

Table 9: Cortical Complexity - Insula

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	2.133	0.113	18.796	0.000
loc1Yes	0.061	0.022	2.764	0.008
age_yr	0.024	0.010	2.402	0.019
sexMale	0.060	0.023	2.625	0.011
bmi_hw_dummy	0.024	0.028	0.862	0.392
study_dummy	-0.003	0.012	-0.275	0.784