ResultsSect

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Descriptives

Participants

Thirty CW (mean age = 25.80 years, SD = 3.84), 30 CM (mean age = 26.03 years, SD = 5.26), 40 TM (mean age = 24.38 years, SD = 5.35), and 41 TW (mean age = 24.88 years, SD = 6.20) participated in the study. One TW participant was excluded because no results could be extracted from FreeSurfer. Demographics can be observed in Table 1. The sample did not differ significantly in age [$F_{(3, 136)} = 0.74$, p = 0.528].
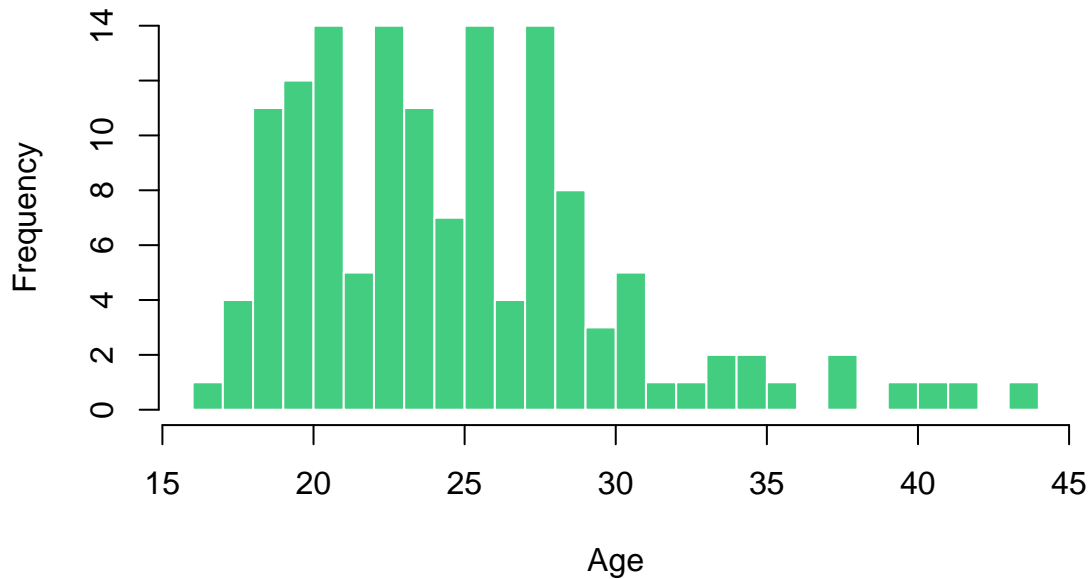
Table with demographic information

Group	CW	CM	TM	TW
Age	25.8 ± 3.84	26.03 ± 5.26	24.38 ± 5.35	24.88 ± 6.2
SES	2.3 ± 0.47	2.23 ± 0.57	2 ± 0.6	1.98 ± 0.7
Education	3.57 ± 0.9	3.43 ± 0.82	3.15 ± 0.74	2.95 ± 0.81
Handedness	1.13 ± 0.35	1.07 ± 0.25	1.07 ± 0.27	1.05 ± 0.22

Code for demographics

The code can be found in markdown version of this file, it is not printed on the PDF

Histogram of age distribution

Results

Repeated measures

Questions: do we want a correlation between regions of the same participant?

First we look at the results for volume. Alle code used to compute this can be found in the markdown version of this document, but is not printed in the pdf.
We fitted two mixed models. In the first model a random intercept for every subject was added, while in the second model age and total intracranial volume are added as covariates. An ANOVA is conducted on the results of the mixed models and an FDR-correction is applied over regions. For the regions where a statistically significant difference was found between the groups post-hoc paired t-tests were conducted that are bonferroni-corrected. The results for both models are very similar. The results for the model without covariates are displayed in the table below.

	CW vs CM	CW vs TM	CW vs TW	CM vs TM	CM vs TW	TM vs TW
L_fusiform_volume	0.001	0.003	0.419	0	0.143	0
L_inferiorparietal_volume	0.006	0.004	1	0	0.43	0
L_postcentral_volume	0	1	0.032	0	0.636	0.002
L_precentral_volume	0.027	0.963	0.229	0.001	1	0.006
L_frontalpole_volume	0.871	1	0.001	0.562	0.31	0
R_fusiform_volume	0	0	0.811	0	0.204	0
R_inferiorparietal_volume	0.022	0.037	0.208	0	1	0
R_postcentral_volume	0.308	0.731	0.132	0.001	1	0
R_precentral_volume	0	1	0	0	1	0
R_frontalpole_volume	0.005	0.674	1	0	0.038	0.102
LeftCerebellumWhiteMatter	0	0.402	1	0	0	0.184
LeftCerebellumCortex	0	0.085	0	0	1	0
RightCerebellumWhiteMatter	0	0.318	1	0	0.001	0.026
RightCerebellumCortex	0	0.02	0.001	0	0.497	0
LeftThalamusProper	0	0.002	0.733	0	0.003	0
LeftCaudate	0	1	0.002	0	1	0.002
LeftPutamen	0.004	1	0.023	0.002	1	0.009
LeftAccumbensarea	NA	NA	NA	NA	NA	NA
RightThalamusProper	0.01	0	1	0	0.104	0
RightCaudate	0	1	0.007	0	0.703	0.009
RightPutamen	0	0.979	0	0	0.457	0
RightAccumbensarea	NA	NA	NA	NA	NA	NA

Then we do the same computations for thickness:

	CW vs CM	CW vs TM	CW vs TW	CM vs TM	CM vs TW	TM vs TW
L_fusiform_thickavg	NA	NA	NA	NA	NA	NA
R_fusiform_thickavg	NA	NA	NA	NA	NA	NA
L_inferiorparietal_thickavg	NA	NA	NA	NA	NA	NA
R_inferiorparietal_thickavg	NA	NA	NA	NA	NA	NA
L_postcentral_thickavg	NA	NA	NA	NA	NA	NA
R_postcentral_thickavg	NA	NA	NA	NA	NA	NA
L_precentral_thickavg	NA	NA	NA	NA	NA	NA
R_precentral_thickavg	NA	NA	NA	NA	NA	NA
L_frontalpole_thickavg	NA	NA	NA	NA	NA	NA
R_frontalpole_thickavg	NA	NA	NA	NA	NA	NA

And surface area:

```
## Warning in cbind(c(" ", substring(names(data.hyp[, 67:86]), 4)),
## rbind(c("CW vs CM", : number of rows of result is not a multiple of vector
## length (arg 1)
```

	CW vs CM	CW vs TM	CW vs TW	CM vs TM	CM vs TW	TM vs TW
L_fusiform_surfavg	0.001	0.884	1	0	0.002	0.334
R_fusiform_surfavg	0.002	0.281	1	0	0.071	0.247
L_inferiorparietal_surfavg	0	0.539	0.844	0	0.012	0.013
R_inferiorparietal_surfavg	0	1	0.701	0	0.016	0.101
L_postcentral_surfavg	0	0.43	0.55	0.013	0.008	1
R_postcentral_surfavg	NA	NA	NA	NA	NA	NA
L_precentral_surfavg	0	1	0.028	0	0.959	0.069
R_precentral_surfavg	0	0.055	0.004	0.002	0.037	1
L_frontalpole_surfavg	NA	NA	NA	NA	NA	NA
R_frontalpole_surfavg	0	1	1	0	0	1