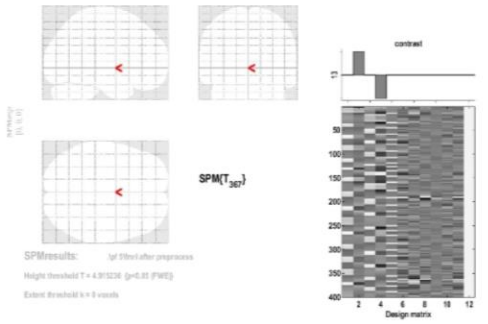
Portfolio 6 - Model estimation

Studygroup 10: Kristian Severin, Lasse Hansen, Lærke Brædder, Jesper Fischer, Sarah Hvid

Report the output coordinate table for each of the 14 contrasts, both significant and non-significant.

rating1-rating2



SPMresults: /pf 59mri after preprocess

Height threshold T = 4.9152236 (p=0.05 (FWE))

Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE-corr}$	$p_{FDR-corr}$	k_E	p_{uncorr}	$p_{FWE-corr}$	$p_{FDR-corr}$	T	(Z_p)	p_{uncorr}	

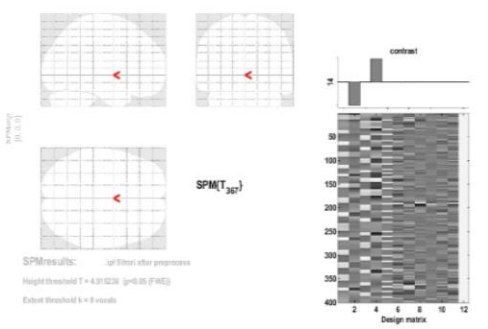
no suprathreshold clusters

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.92, p = 0.000 (0.050)
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 3.129
Expected number of clusters, <c> = 0.05
FWEp: 4.915, FDRp: Inf, FWEc: Inf, FDRc: Inf

Degrees of freedom = [1.0, 367.0]
FWHM = 9.6 9.6 9.4 mm mm mm; 4.8 4.8 4.7 {voxels}
Volume: 1048464 = 2208000 voxels = 1581.9 resels
Voxel size: 2.0 2.0 2.0 mm mm mm; {resel = 198.17 voxels}

rating2-rating1



SPMresults: /pf 59mri after preprocess

Height threshold T = 4.9152236 (p=0.05 (FWE))

Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE-corr}$	$p_{FDR-corr}$	k_E	p_{uncorr}	$p_{FWE-corr}$	$p_{FDR-corr}$	T	(Z_p)	p_{uncorr}	

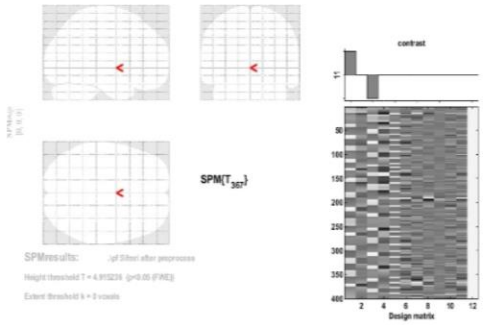
no suprathreshold clusters

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.92, p = 0.000 (0.050)
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 3.129
Expected number of clusters, <c> = 0.05
FWEp: 4.915, FDRp: Inf, FWEc: Inf, FDRc: Inf

Degrees of freedom = [1.0, 367.0]
FWHM = 9.6 9.6 9.4 mm mm mm; 4.8 4.8 4.7 {voxels}
Volume: 1048464 = 2208000 voxels = 1581.9 resels
Voxel size: 2.0 2.0 2.0 mm mm mm; {resel = 198.17 voxels}

story1-story2



SPMresults: /pf 59mri after preprocess

Height threshold T = 4.9152236 (p=0.05 (FWE))

Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE-corr}$	$p_{FDR-corr}$	k_E	p_{uncorr}	$p_{FWE-corr}$	$p_{FDR-corr}$	T	(Z_p)	p_{uncorr}	

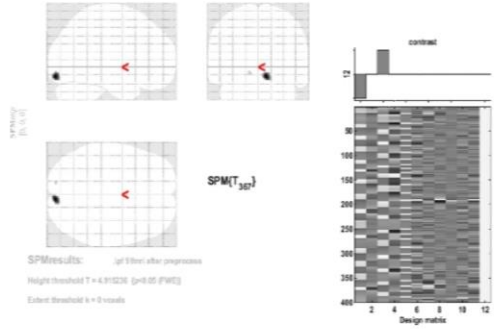
no suprathreshold clusters

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.92, p = 0.000 (0.050)
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 3.129
Expected number of clusters, <c> = 0.05
FWEp: 4.915, FDRp: Inf, FWEc: Inf, FDRc: Inf

Degrees of freedom = [1.0, 367.0]
FWHM = 9.6 9.6 9.4 mm mm mm; 4.8 4.8 4.7 {voxels}
Volume: 1048464 = 2208000 voxels = 1581.9 resels
Voxel size: 2.0 2.0 2.0 mm mm mm; {resel = 198.17 voxels}

story2-story1



SPMresults: /pf 59mri after preprocess

Height threshold T = 4.9152236 (p=0.05 (FWE))

Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

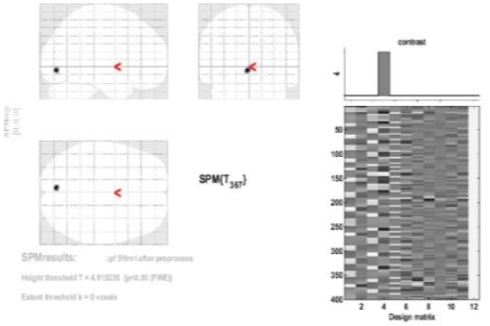
set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE-corr}$	$p_{FDR-corr}$	k_E	p_{uncorr}	$p_{FWE-corr}$	$p_{FDR-corr}$	T	(Z_p)	p_{uncorr}	
0.001	2	0.696	0.696	44	0.000	0.000	0.000	6.45	6.44	0.000	8 -90 -16
		0.834	0.696	5	0.000	0.000	0.000	5.34	5.34	0.000	-34 -90 -12

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.92, p = 0.000 (0.050)
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 3.129
Expected number of clusters, <c> = 0.05
FWEp: 4.915, FDRp: 6.654, FWEc: 3, FDRc: 64

Degrees of freedom = [1.0, 367.0]
FWHM = 9.6 9.6 9.4 mm mm mm; 4.8 4.8 4.7 {voxels}
Volume: 1048464 = 2208000 voxels = 1581.9 resels
Voxel size: 2.0 2.0 2.0 mm mm mm; {resel = 198.17 voxels}

pos_story2rating



SPMresults: :pf 59mri after preprocess
Height threshold T = 4.9152 {p=0.05 (FWE)}
Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

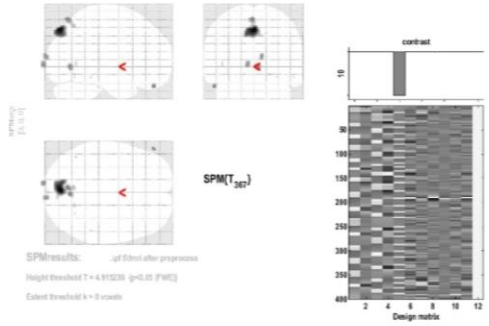
set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	k_E	p_{uncorr}	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	T	$(Z_\equiv)$	p_{uncorr}	
0.000	26	0.000	0.000	1242	0.000	0.000	0.000	8.48	Inf	0.000	54 -78 -20
						0.000	0.000	8.20	7.84	0.000	-2 -94 -8
						0.000	0.000	6.81	6.63	0.000	28 -94 -06
		0.000	0.000	163	0.000	0.000	0.000	7.45	7.27	0.000	26 -66 60
		0.000	0.000	1226	0.000	0.000	0.000	7.04	6.82	0.000	-8 -72 60
						0.000	0.000	6.56	6.74	0.000	2 -72 46
						0.000	0.000	6.39	6.21	0.000	-30 -76 32
		0.000	0.000	90	0.000	0.000	0.000	6.70	6.51	0.000	-34 -28 0
		0.000	0.002	44	0.001	0.000	0.000	6.19	6.04	0.000	-66 -46 0
		0.000	0.002	41	0.001	0.000	0.000	6.08	5.93	0.000	60 -32 -8
		0.000	0.000	309	0.000	0.000	0.000	6.02	5.87	0.000	30 6 62
						0.000	0.000	5.94	5.43	0.000	20 -8 72
		0.000	0.000	161	0.000	0.000	0.000	5.83	5.70	0.000	-32 -74 54
						0.000	0.000	5.71	5.56	0.000	-32 -58 50
		0.000	0.002	49	0.001	0.000	0.000	5.73	5.61	0.000	38 -68 8
		0.000	0.005	21	0.004	0.000	0.000	5.45	5.33	0.000	-32 -66 34
		0.000	0.000	31	0.000	0.000	0.000	5.42	5.31	0.000	0 -56 56
		0.000	0.005	21	0.004	0.000	0.000	5.40	5.29	0.000	56 -64 26

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.52, p = 0.000 [0.050]
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 3.129
Expected number of clusters, <c> = 0.05
FWEp: 4.915, FDRp: 5.659, FWEc: 25, FDRc: 25

Degrees of freedom = [1.0, 367.0]
FWHM = 9.0 9.0 9.4 mm mm mm; 4.0 4.0 4.7 (voxels)
Volume: 1946464 = 230800 voxels = 1991.9 resels
Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 108.17 voxels)

neg_rating



SPMresults: :pf 59mri after preprocess
Height threshold T = 4.9152 {p=0.05 (FWE)}
Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

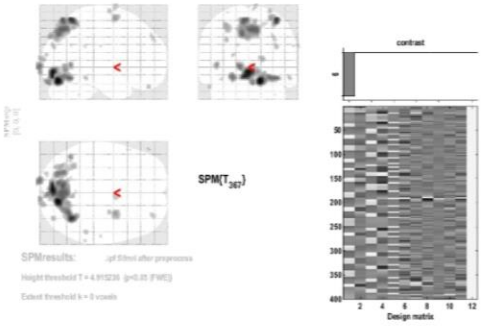
set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	k_E	p_{uncorr}	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	T	$(Z_\equiv)$	p_{uncorr}	
0.004	10	0.000	0.000	274	0.000	0.000	0.000	6.36	6.19	0.000	0 -82 46
						0.836	0.747	5.01	4.91	0.000	8 -94 30
		0.000	0.014	28	0.005	0.000	0.177	5.55	5.44	0.000	6 -68 -2
		0.030	0.328	5	0.192	0.000	0.177	5.35	5.43	0.000	-36 44 -28
		0.000	0.005	43	0.005	0.000	0.177	5.55	5.45	0.000	-6 -72 49
						0.828	0.694	5.14	5.04	0.000	-4 -94 30
		0.000	0.014	30	0.006	0.000	0.194	5.49	5.38	0.000	-30 -104 0
		0.000	0.014	25	0.008	0.000	0.293	5.42	5.32	0.000	30 -106 12
		0.032	0.344	4	0.245	0.000	0.747	5.02	4.94	0.000	20 -62 -52
		0.029	0.348	1	0.348	0.000	0.747	5.00	4.92	0.000	52 -66 -06
		0.014	0.186	5	0.109	0.000	0.747	5.00	4.92	0.000	-66 -46 2
		0.029	0.348	1	0.348	0.047	0.934	4.53	4.45	0.000	30 -62 -06

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.52, p = 0.000 [0.050]
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 3.129
Expected number of clusters, <c> = 0.05
FWEp: 4.915, FDRp: 6.340, FWEc: 1, FDRc: 25

Degrees of freedom = [1.0, 367.0]
FWHM = 9.0 9.0 9.4 mm mm mm; 4.0 4.0 4.7 (voxels)
Volume: 1946464 = 230800 voxels = 1991.9 resels
Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 108.17 voxels)

neg_story1



SPMresults: :pf 59mri after preprocess
Height threshold T = 4.9152 {p=0.05 (FWE)}
Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

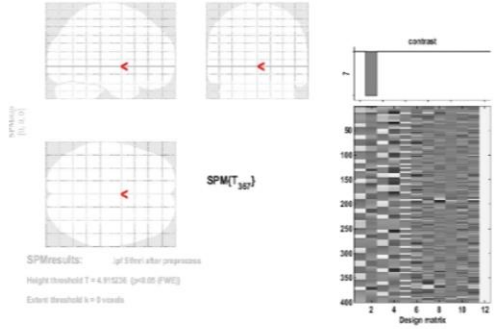
set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	k_E	p_{uncorr}	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	T	$(Z_\equiv)$	p_{uncorr}	
0.004	24	0.000	0.000	1242	0.000	0.000	0.000	8.48	Inf	0.000	54 -78 -20
						0.000	0.000	8.20	7.84	0.000	-2 -94 -8
						0.000	0.000	6.81	6.63	0.000	28 -94 -06
		0.000	0.000	163	0.000	0.000	0.000	7.45	7.27	0.000	26 -66 60
		0.000	0.000	1226	0.000	0.000	0.000	7.04	6.82	0.000	-8 -72 60
						0.000	0.000	6.56	6.74	0.000	2 -72 46
						0.000	0.000	6.39	6.21	0.000	-30 -76 32
		0.000	0.000	90	0.000	0.000	0.000	6.70	6.51	0.000	-34 -28 0
		0.000	0.002	44	0.001	0.000	0.000	6.19	6.04	0.000	-66 -46 0
		0.000	0.002	41	0.001	0.000	0.000	6.08	5.93	0.000	60 -32 -8
		0.000	0.000	309	0.000	0.000	0.000	6.02	5.87	0.000	30 6 62
						0.000	0.000	5.94	5.43	0.000	20 -8 72
		0.000	0.000	161	0.000	0.000	0.000	5.83	5.70	0.000	-32 -74 54
						0.000	0.000	5.71	5.56	0.000	-32 -58 50
		0.000	0.002	49	0.001	0.000	0.000	5.73	5.61	0.000	38 -68 8
		0.000	0.005	21	0.004	0.000	0.000	5.45	5.33	0.000	-32 -66 34
		0.000	0.000	31	0.000	0.000	0.000	5.42	5.31	0.000	0 -56 56
		0.000	0.005	21	0.004	0.000	0.000	5.40	5.29	0.000	56 -64 26

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.52, p = 0.000 [0.050]
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 3.129
Expected number of clusters, <c> = 0.05
FWEp: 4.915, FDRp: 5.734, FWEc: 1, FDRc: 21

Degrees of freedom = [1.0, 367.0]
FWHM = 9.0 9.0 9.4 mm mm mm; 4.0 4.0 4.7 (voxels)
Volume: 1946464 = 230800 voxels = 1991.9 resels
Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 108.17 voxels)

neg_story1rating



SPMresults: :pf 59mri after preprocess
Height threshold T = 4.9152 {p=0.05 (FWE)}
Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	k_E	p_{uncorr}	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	T	$(Z_\equiv)$	p_{uncorr}	

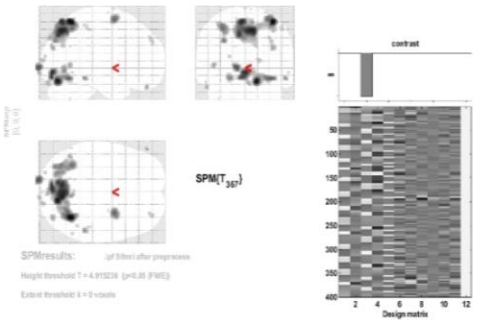
no suprathreshold clusters

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.52, p = 0.000 [0.659]
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 3.129
Expected number of clusters, <c> = 0.05
FWEp: 4.915, FDRp: Inf, FWEc: Inf, FDRc: Inf

Degrees of freedom = [1.0, 367.0]
FWHM = 9.0 9.0 9.4 mm mm mm; 4.0 4.0 4.7 (voxels)
Volume: 1946464 = 230800 voxels = 1991.9 resels
Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 108.17 voxels)

neg_story2



SPMresults: spf filtrvi after preprocess

Height threshold T = 4.915236 (p=0.05 (FWE))

Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

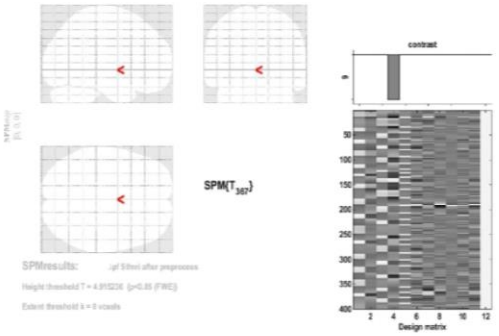
set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE-corr}$	$q_{FDR-corr}$	k_E	p_{uncorr}	$p_{FWE-corr}$	$q_{FDR-corr}$	T	(Z_δ)	p_{uncorr}	
0.000	24	0.000	0.000	1810	0.000	0.000	0.000	8.35	7.71	0.000	34 -66 63
						0.000	0.000	7.85	7.34	0.000	32 -72 49
						0.000	0.000	7.49	7.04	0.000	4 -72 52
		0.000	0.000	788	0.000	0.000	0.000	7.76	7.64	0.000	14 -76 -18
						0.000	0.000	7.36	7.12	0.000	-2 -84 -6
						0.000	0.000	6.97	6.77	0.000	12 +62 +64
		0.000	0.000	161	0.000	0.000	0.000	6.87	6.66	0.000	-14 -104 -2
		0.000	0.000	154	0.000	0.000	0.001	6.39	6.40	0.000	26 6 62
		0.000	0.000	451	0.000	0.000	0.000	6.49	6.91	0.000	-32 -56 50
						0.000	0.004	6.30	6.24	0.000	-14 +72 34
						0.000	0.005	6.23	6.07	0.000	+30 +66 34
		0.000	0.000	168	0.000	0.000	0.000	6.14	5.98	0.000	22 -76 -16
		0.000	0.019	25	0.000	0.000	0.019	5.96	5.82	0.000	52 +66 +16
		0.000	0.031	19	0.000	0.000	0.022	5.92	5.78	0.000	8 -66 58
						0.000	0.042	5.82	5.72	0.000	2 -54 62
		0.044	0.350	7	0.126	0.031	0.055	5.85	5.68	0.000	-54 44 -20
		0.000	0.019	26	0.007	0.031	0.033	5.81	5.66	0.000	-48 -66 2
		0.000	0.039	33	0.003	0.031	0.046	5.74	5.61	0.000	36 -84 24

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.92, p = 0.000 (0.050)
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 3.129
Expected number of clusters, <c> = 0.05
FWEp: 4.915, FDRp: 5.734, FWEc: 1, FDRc: 18

Degrees of freedom = [1.0, 367.0]
FWHM = 9.6 9.9 9.4 mm mm mm; 4.8 4.8 4.7 (voxels)
Volume: 1846464 = 230808 voxels = 1991.9 resels
Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 108.17 voxels)
Page 1

neg_story2rating



SPMresults: spf filtrvi after preprocess

Height threshold T = 4.915236 (p=0.05 (FWE))

Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE-corr}$	$q_{FDR-corr}$	k_E	p_{uncorr}	$p_{FWE-corr}$	$q_{FDR-corr}$	T	(Z_δ)	p_{uncorr}	

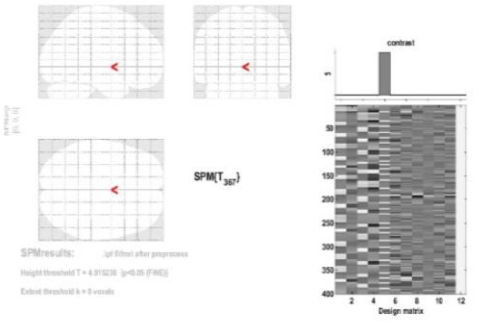
no suprathreshold clusters

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.92, p = 0.000 (0.050)
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 3.129
Expected number of clusters, <c> = 0.05
FWEp: 4.915, FDRp: Inf, FWEc: Inf, FDRc: Inf

Degrees of freedom = [1.0, 367.0]
FWHM = 9.6 9.9 9.4 mm mm mm; 4.8 4.8 4.7 (voxels)
Volume: 1846464 = 230808 voxels = 1991.9 resels
Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 108.17 voxels)

pos_rating



SPMresults: spf filtrvi after preprocess

Height threshold T = 4.915236 (p=0.05 (FWE))

Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE-corr}$	$q_{FDR-corr}$	k_E	p_{uncorr}	$p_{FWE-corr}$	$q_{FDR-corr}$	T	(Z_δ)	p_{uncorr}	

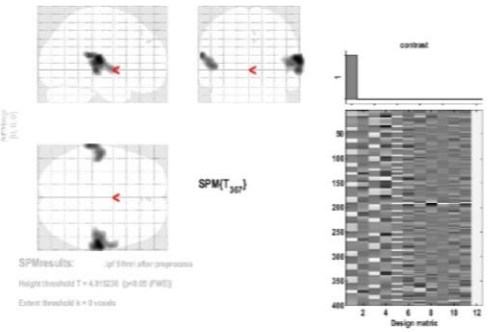
no suprathreshold clusters

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.92, p = 0.000 (0.050)
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 3.129
Expected number of clusters, <c> = 0.05
FWEp: 4.915, FDRp: Inf, FWEc: Inf, FDRc: Inf

Degrees of freedom = [1.0, 367.0]
FWHM = 9.6 9.9 9.4 mm mm mm; 4.8 4.8 4.7 (voxels)
Volume: 1846464 = 230808 voxels = 1991.9 resels
Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 108.17 voxels)

pos_story1



SPMresults: spf filtrvi after preprocess

Height threshold T = 4.915236 (p=0.05 (FWE))

Extent threshold k = 0 voxels

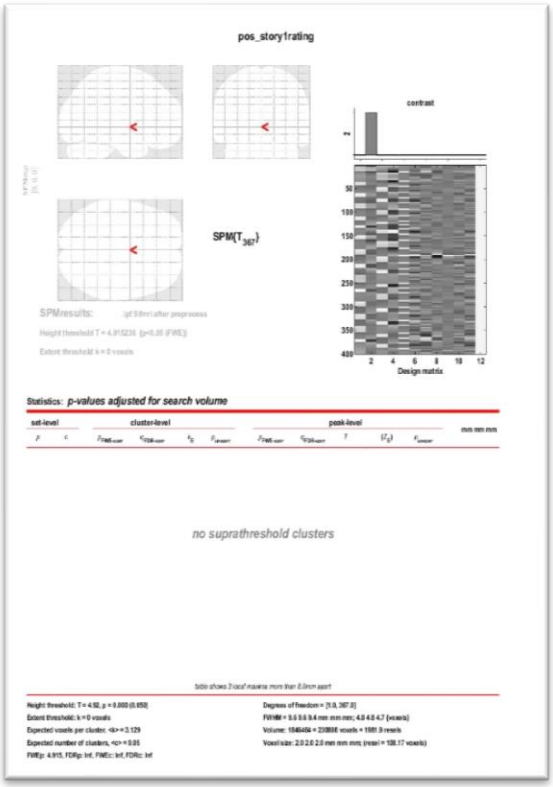
Statistics: *p-values adjusted for search volume*

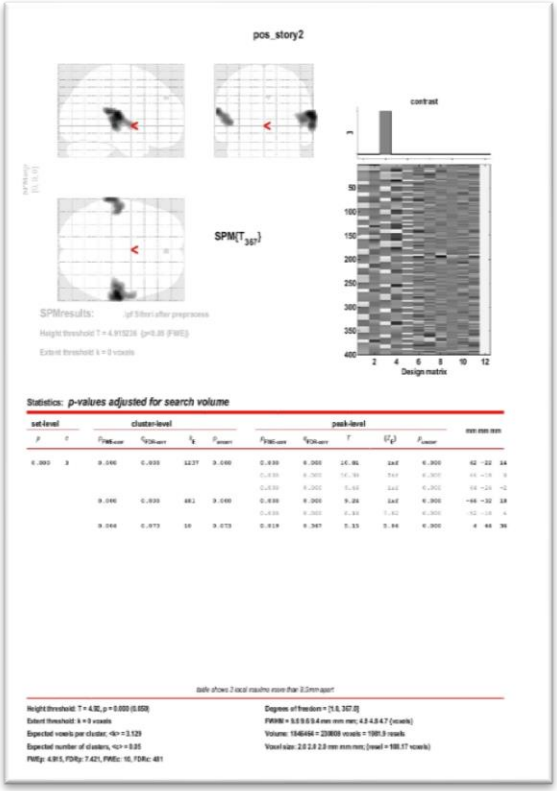
set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE-corr}$	$q_{FDR-corr}$	k_E	c_{uncorr}	$p_{FWE-corr}$	$q_{FDR-corr}$	T	(Z_δ)	p_{uncorr}	
0.000	4	0.000	0.000	3194	0.000	0.000	0.000	14.84	Inf	0.000	44 -28 12
						0.000	0.000	7.25	Inf	0.000	54 -24 -2
						0.000	0.000	6.46	Inf	0.000	54 -18 8
		0.000	0.000	467	0.000	0.000	0.000	6.50	Inf	0.000	-46 -32 16
						0.000	0.000	6.52	Inf	0.000	-52 -18 4
		0.032	0.325	8	0.241	0.037	0.820	4.99	4.90	0.000	8 46 34
		0.025	0.498	2	0.408	0.043	0.847	4.95	4.87	0.000	4 36 44

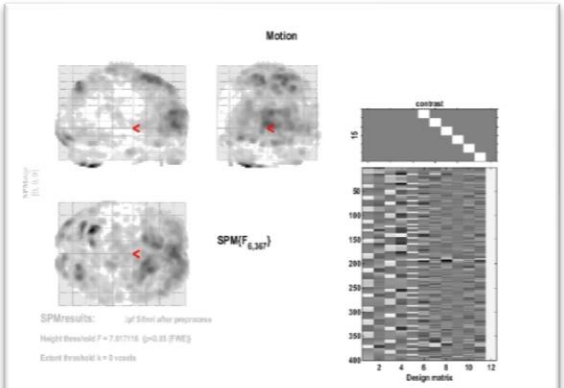
table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.92, p = 0.000 (0.050)
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 3.129
Expected number of clusters, <c> = 0.05
FWEp: 4.915, FDRp: 7.356, FWEc: 2, FDRc: 487

Degrees of freedom = [1.0, 367.0]
FWHM = 9.6 9.9 9.4 mm mm mm; 4.8 4.8 4.7 (voxels)
Volume: 1846464 = 230808 voxels = 1991.9 resels
Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 108.17 voxels)


pos_story1rating
contrast
SPM{T367}
Design matrix
SPMresults:
Height threshold T = 4.915236 (p=0.05 (FWE))
Extent threshold k = 0 voxels
Statistics: p-values adjusted for search volume
set-level
cluster-level
peak-level
mm mm mm
no suprathreshold clusters
table shows 3 local maxima more than 8.0mm apart
Height threshold: T = 4.92, p = 0.000 (0.050)
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 3.129
Expected number of clusters, <c> = 0.05
FWEp: 4.915, FDRp: Inf, FWEc: Inf, FDRc: Inf
Degrees of freedom = [1.0, 367.0]
FWHM = 9.6 9.6 9.4 mm mm mm; 4.8 4.8 4.7 (voxels)
Volume: 1046464 = 230808 voxels = 1981.9 resels
Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 108.17 voxels)


pos_story2
contrast
SPM{T367}
Design matrix
SPMresults:
Height threshold T = 4.915236 (p=0.05 (FWE))
Extent threshold k = 0 voxels
Statistics: p-values adjusted for search volume
set-level
cluster-level
peak-level
mm mm mm
table shows 3 local maxima more than 8.0mm apart
Height threshold: T = 4.92, p = 0.000 (0.050)
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 3.129
Expected number of clusters, <c> = 0.05
FWEp: 4.915, FDRp: 7.421, FWEc: 16, FDRc: 481
Degrees of freedom = [1.0, 367.0]
FWHM = 9.6 9.6 9.4 mm mm mm; 4.8 4.8 4.7 (voxels)
Volume: 1046464 = 230808 voxels = 1981.9 resels
Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 108.17 voxels)



SPMresults: spf 5/mri after preprocess

Height threshold F = 7.017116 (p=0.05 (FWE))

Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE\text{-}corr}$	$p_{FDR\text{-}corr}$	k_E	p_{uncorr}	$p_{FWE\text{-}corr}$	$p_{FDR\text{-}corr}$	F	$(Z_\equiv)$	p_{uncorr}	
		0.004	0.137	6	0.365	0.031	0.249	7.70	5.23	0.000	2 24 -8
		0.004	0.137	6	0.365	0.032	0.240	7.67	5.22	0.000	40 -72 14
		0.002	0.090	16	0.255	0.033	0.206	7.63	5.20	0.000	-30 16 8
		0.003	0.096	7	0.363	0.033	0.324	7.57	5.17	0.000	26 -34 -24
		0.003	0.096	7	0.363	0.034	0.334	7.55	5.17	0.000	-34 26 24
		0.008	0.168	4	0.149	0.039	0.407	7.46	5.12	0.000	-58 -12 8
		0.031	0.244	3	0.208	0.025	0.479	7.38	5.09	0.000	4 -74 -38
		0.008	0.168	4	0.149	0.023	0.479	7.38	5.09	0.000	24 -74 -26
		0.004	0.127	6	0.262	0.022	0.482	7.37	5.08	0.000	40 -24 42
		0.031	0.227	2	0.302	0.024	0.494	7.34	5.08	0.000	36 -72 -26
		0.024	0.470	1	0.470	0.024	0.495	7.34	5.08	0.000	2 -8 54
		0.004	0.137	6	0.365	0.025	0.513	7.34	5.07	0.000	-2 -32 56
		0.024	0.470	1	0.470	0.025	0.517	7.33	5.07	0.000	-64 -16 26
		0.031	0.244	3	0.208	0.026	0.525	7.32	5.06	0.000	12 -66 -26
		0.008	0.168	4	0.149	0.026	0.526	7.32	5.06	0.000	-16 -22 22
		0.035	0.237	2	0.302	0.027	0.536	7.31	5.06	0.000	-50 -62 8
		0.008	0.168	4	0.149	0.028	0.547	7.29	5.04	0.000	-36 -14 60
		0.004	0.150	5	0.115	0.030	0.602	7.22	5.01	0.000	-52 22 -24

table shows 3 local maxima more than 8.0mm apart

Height threshold: F = 7.02, p = 0.000 (0.050)

Extent threshold: k = 0 voxels

Expected voxels per cluster, <k> = 2.020

Expected number of clusters, <c> = 0.65

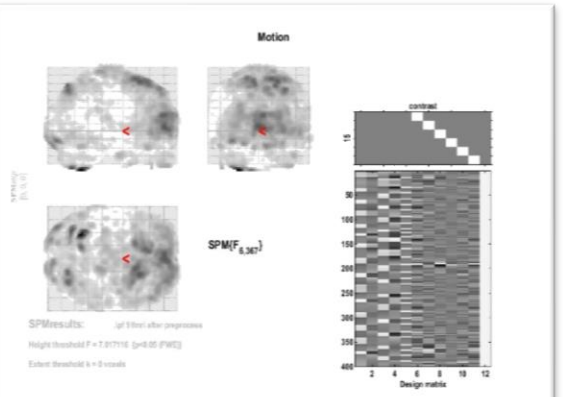
FWEp: 7.017, FDRp: 8.462, FWEc: 1, FDRc: 11

Degrees of freedom = [6.0, 367.0]

FWHM = 9.5 9.5 9.4 mm mm mm; 4.8 4.8 4.7 (voxels)

Volume: 1646464 = 230800 voxels = 1501.9 resels

Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 108.17 voxels)



SPMresults: spf 5/mri after preprocess

Height threshold F = 7.017116 (p=0.05 (FWE))

Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE\text{-}corr}$	$p_{FDR\text{-}corr}$	k_E	p_{uncorr}	$p_{FWE\text{-}corr}$	$p_{FDR\text{-}corr}$	F	$(Z_\equiv)$	p_{uncorr}	
		0.024	0.470	1	0.470	0.937	0.740	7.36	4.96	0.000	66 -26 -6
		0.024	0.470	1	0.470	0.941	0.827	7.33	4.96	0.000	52 -76 8
		0.024	0.470	1	0.470	0.943	0.852	7.49	4.95	0.000	-64 -36 20
		0.024	0.470	1	0.470	0.943	0.869	7.48	4.95	0.000	-50 36 -20
		0.024	0.470	1	0.470	0.944	0.884	7.47	4.94	0.000	-48 24 40

table shows 3 local maxima more than 8.0mm apart

Height threshold: F = 7.02, p = 0.000 (0.050)

Extent threshold: k = 0 voxels

Expected voxels per cluster, <k> = 2.020

Expected number of clusters, <c> = 0.65

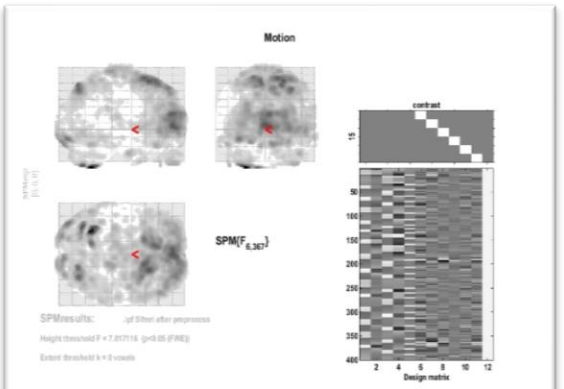
FWEp: 7.017, FDRp: 8.462, FWEc: 1, FDRc: 11

Degrees of freedom = [6.0, 367.0]

FWHM = 9.5 9.5 9.4 mm mm mm; 4.8 4.8 4.7 (voxels)

Volume: 1646464 = 230800 voxels = 1501.9 resels

Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 108.17 voxels)



SPMresults: spf 5/mri after preprocess

Height threshold F = 7.017116 (p=0.05 (FWE))

Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE\text{-}corr}$	$p_{FDR\text{-}corr}$	k_E	p_{uncorr}	$p_{FWE\text{-}corr}$	$p_{FDR\text{-}corr}$	F	$(Z_\equiv)$	p_{uncorr}	
0.003	48	0.000	0.000	726	0.000	0.000	0.000	55.43	Inf	0.000	-30 -56 -52
						0.000	0.000	37.56	Inf	0.000	-36 -70 -56
						0.000	0.000	32.68	Inf	0.000	-12 -58 -52
		Set	0.000	56724	0.000	0.000	0.000	54.55	Inf	0.000	0 54 4
						0.000	0.000	31.46	Inf	0.000	22 20 52
						0.000	0.000	24.44	Inf	0.000	4 52 -14
		0.000	0.000	2634	0.000	0.000	0.000	29.99	Inf	0.000	-38 -68 -14
						0.000	0.000	23.24	Inf	0.000	-22 -58 -18
						0.000	0.000	17.58	Inf	0.000	-18 -86 -16
		0.000	0.000	2042	0.000	0.000	0.000	25.69	Inf	0.000	8 -96 -22
						0.000	0.000	21.76	Inf	0.000	30 -94 -18
						0.000	0.000	20.84	Inf	0.000	14 -100 -16
		0.000	0.000	784	0.000	0.000	0.000	19.61	Inf	0.000	-34 58 -48
						0.000	0.000	12.26	8.09	0.000	-36 64 -34
						0.000	0.000	10.98	8.40	0.000	-44 50 -32
		0.000	0.000	374	0.000	0.000	0.000	18.48	Inf	0.000	38 54 -46
						0.000	0.001	9.36	8.15	0.000	20 62 -34
						0.001	0.000	8.25	7.83	0.000	42 46 -34

table shows 3 local maxima more than 8.0mm apart

Height threshold: F = 7.02, p = 0.000 (0.050)

Extent threshold: k = 0 voxels

Expected voxels per cluster, <k> = 2.020

Expected number of clusters, <c> = 9.05

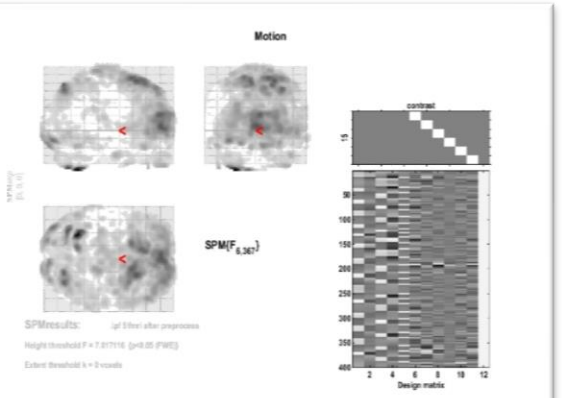
FWEp: 7.017, FDRp: 8.462, FWEc: 1, FDRc: 11

Degrees of freedom = [6.0, 367.0]

FWHM = 9.5 9.5 9.4 mm mm mm; 4.8 4.8 4.7 (voxels)

Volume: 1646464 = 230800 voxels = 1501.9 resels

Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 108.17 voxels)



SPMresults: spf 5/mri after preprocess

Height threshold F = 7.017116 (p=0.05 (FWE))

Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE\text{-}corr}$	$p_{FDR\text{-}corr}$	k_E	p_{uncorr}	$p_{FWE\text{-}corr}$	$p_{FDR\text{-}corr}$	F	$(Z_\equiv)$	p_{uncorr}	
		0.000	0.000	462	0.000	0.000	0.000	16.41	Inf	0.000	66 -6 -34
						0.000	0.000	13.54	8.48	0.000	56 8 -44
						0.000	0.001	10.49	8.43	0.000	40 62 -32
		0.000	0.000	90	0.000	0.000	0.000	17.25	Inf	0.000	-52 36 -10
						0.000	0.000	11.49	8.74	0.000	-62 46 -24
						0.000	0.002	10.67	8.25	0.000	-52 42 -36
		0.000	0.000	806	0.000	0.000	0.000	15.46	Inf	0.000	42 -68 -10
						0.000	0.000	14.74	9.75	0.000	64 -44 -12
						0.000	0.000	12.46	9.05	0.000	50 -58 -10
		0.000	0.000	219	0.000	0.000	0.000	13.65	9.24	0.000	60 -36 24
						0.000	0.000	9.84	8.13	0.000	54 -32 30
						0.000	0.000	9.31	8.04	0.000	36 -42 24
		0.000	0.000	24	0.002	0.000	0.000	12.28	9.00	0.000	8 66 -22
		0.000	0.000	306	0.000	0.000	0.000	11.52	8.69	0.000	32 -62 -56
						0.000	0.000	10.69	8.34	0.000	44 -62 -36
						0.000	0.001	9.46	7.84	0.000	36 -62 -46
		0.000	0.000	169	0.000	0.000	0.000	11.51	8.69	0.000	-52 54 -46
						0.000	0.000	9.20	8.03	0.000	-44 62 -36

table shows 3 local maxima more than 8.0mm apart

Height threshold: F = 7.02, p = 0.000 (0.050)

Extent threshold: k = 0 voxels

Expected voxels per cluster, <k> = 2.020

Expected number of clusters, <c> = 0.65

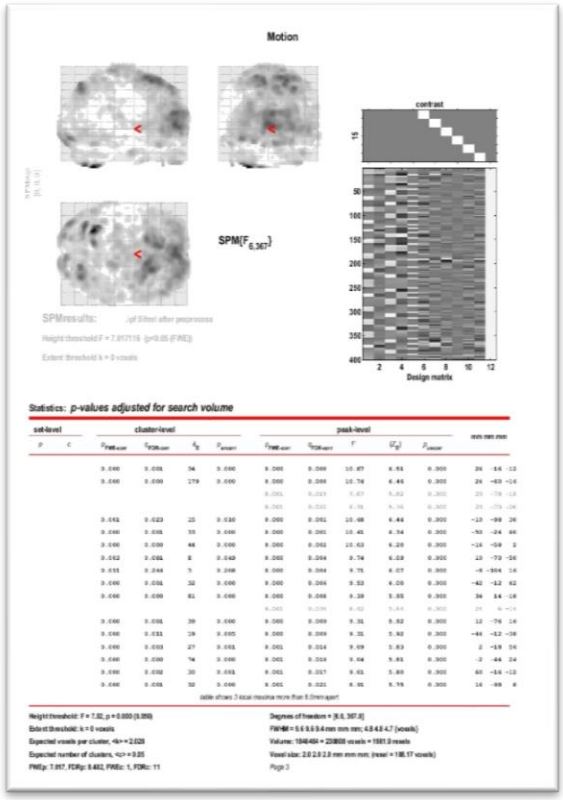
FWEp: 7.017, FDRp: 8.462, FWEc: 1, FDRc: 11

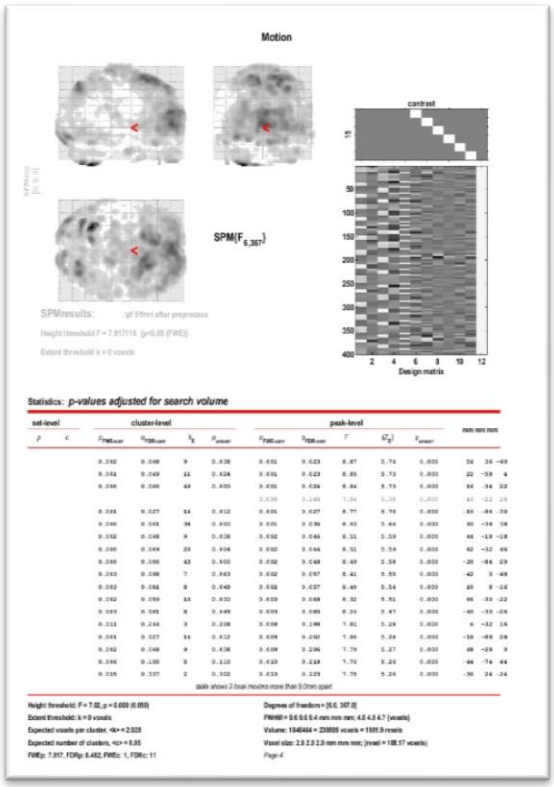
Degrees of freedom = [6.0, 367.0]

FWHM = 9.5 9.5 9.4 mm mm mm; 4.8 4.8 4.7 (voxels)

Volume: 1646464 = 230800 voxels = 1501.9 resels

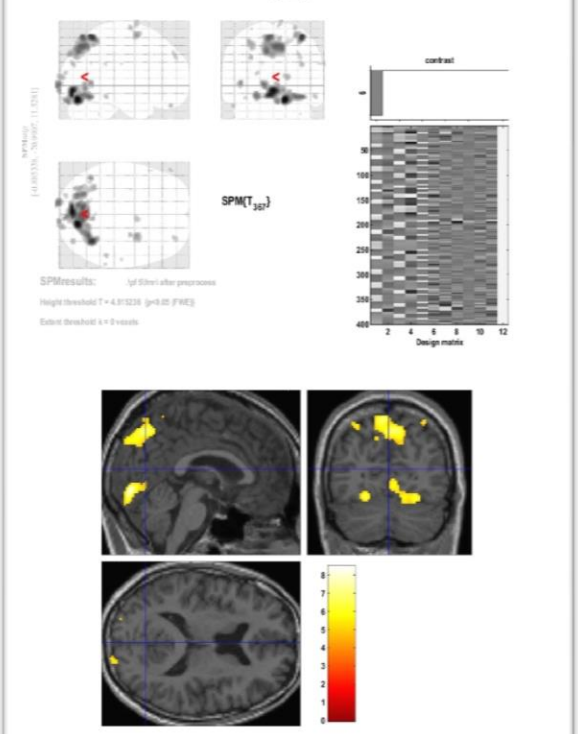
Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 108.17 voxels)



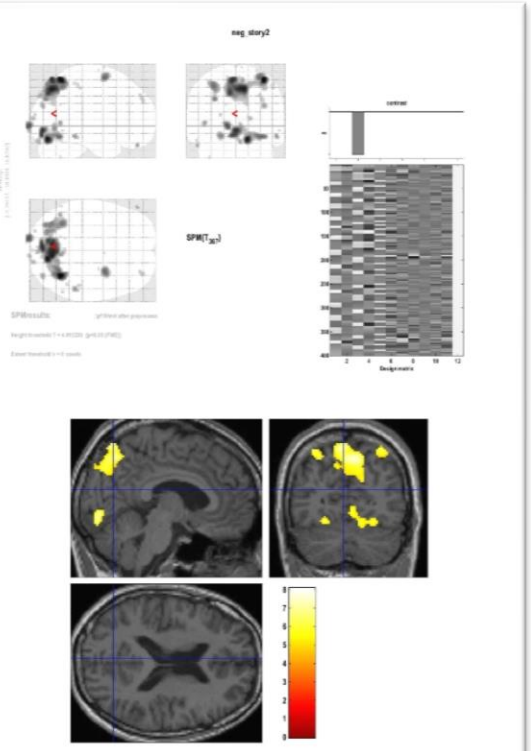


2. For significant contrasts, include a nice overlayed image, displaying the most significant effect.

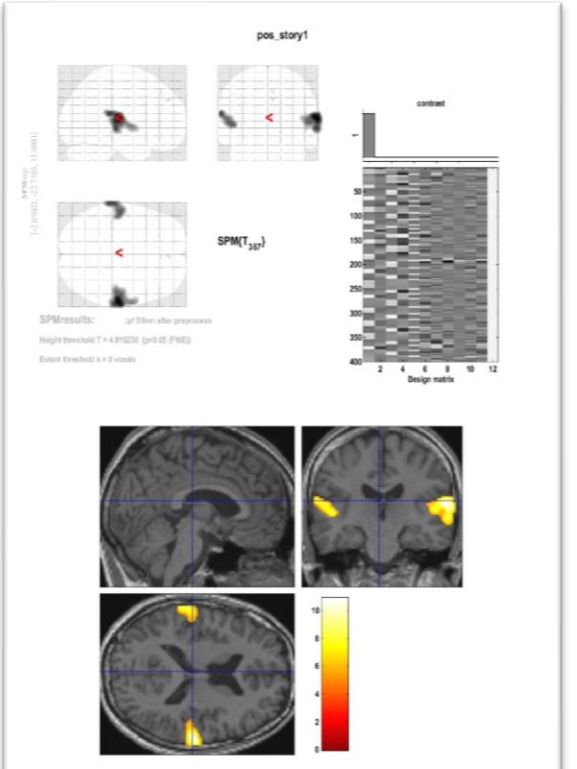
neg_story1



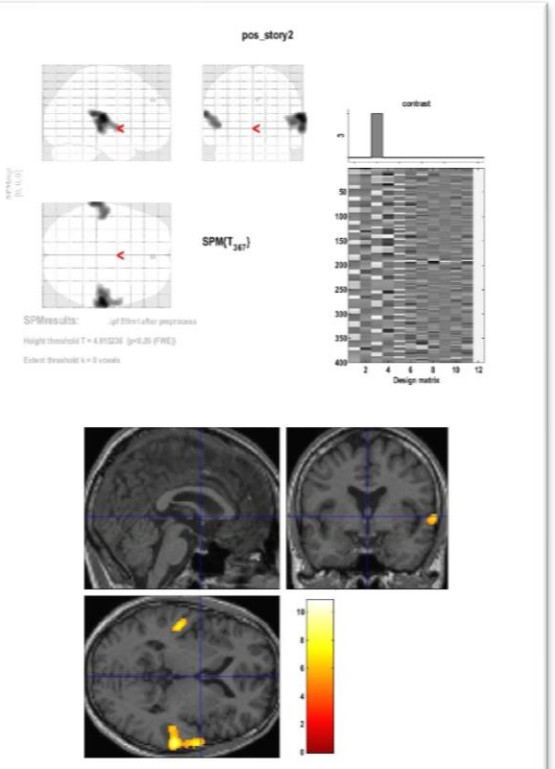
neg_story2

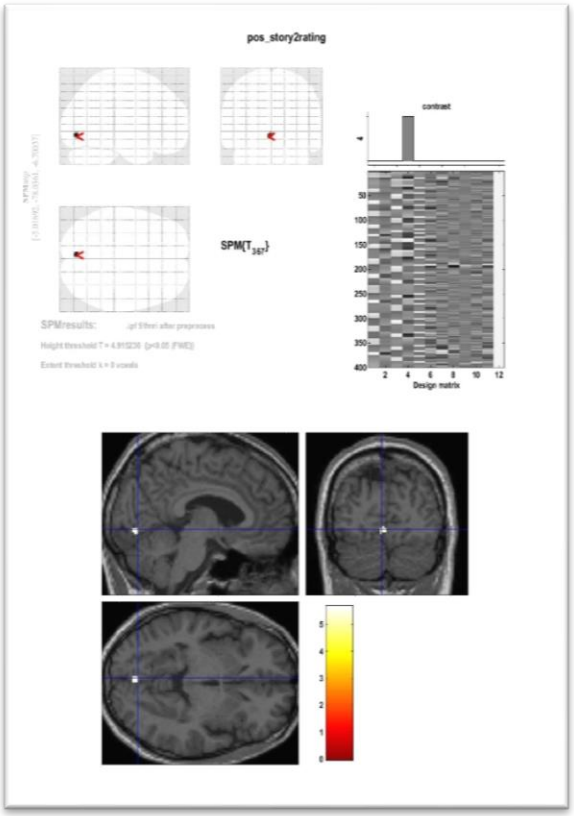


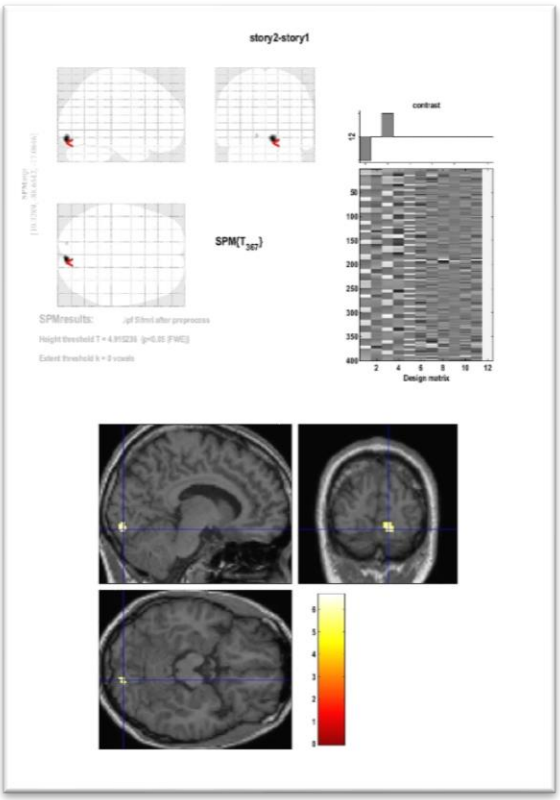
pos_story1

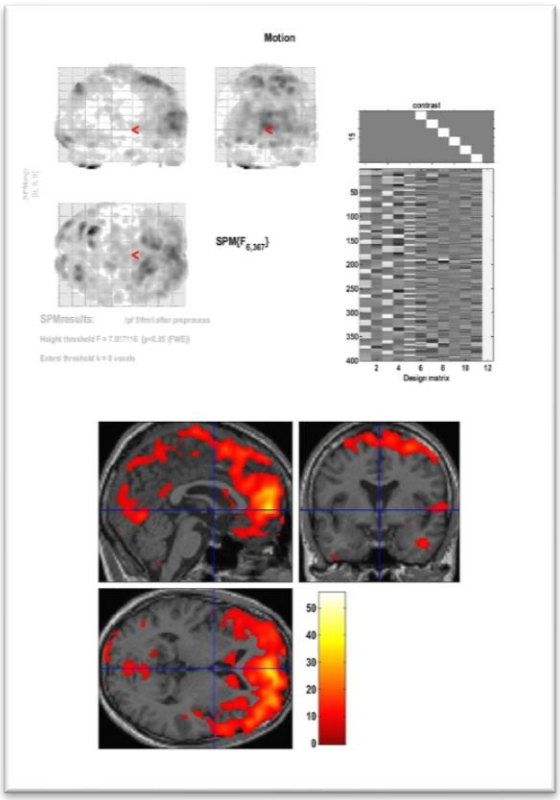


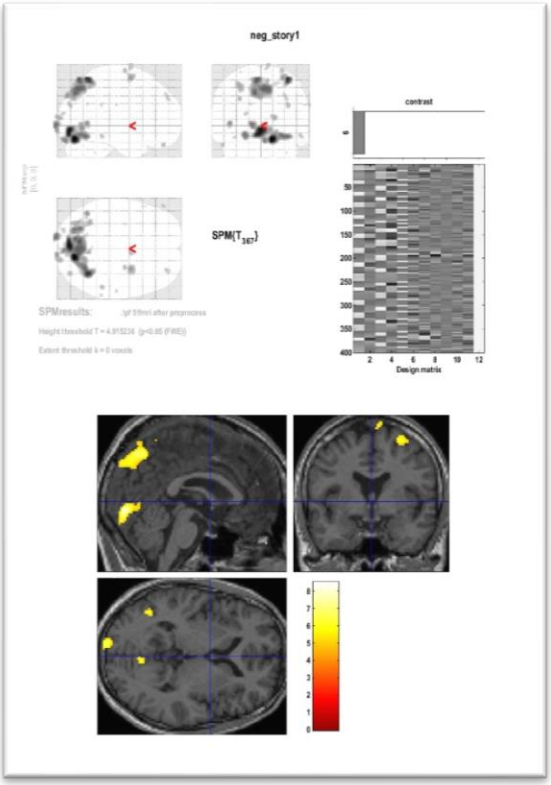
pos_story2



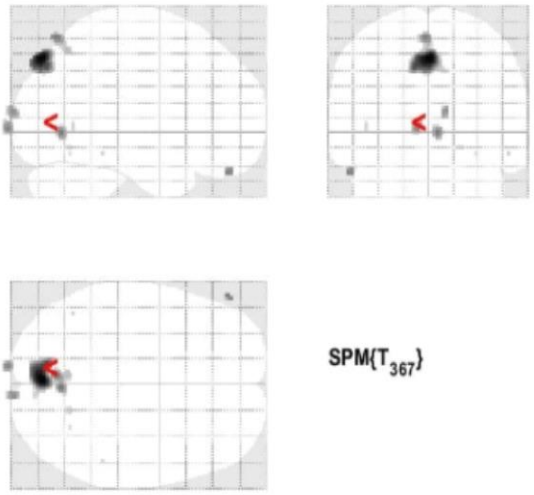

pos_story2rating
contrast
SPM(T367)
Design matrix


story2-story1
contrast
SPM(T367)
Design matrix

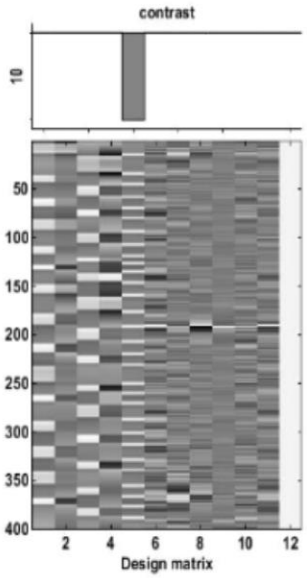

Motion
contrast
SPM(F6,367)
Design matrix


neg_story1
contrast
SPM(T367)
Design matrix

neg_rating



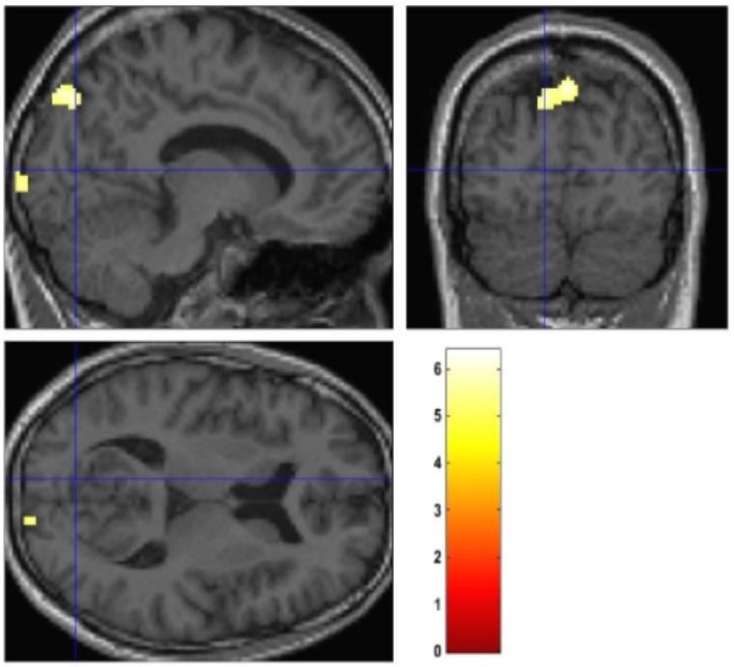
SPM{T_{367}}



SPMresults: .\pf 5\fmri after preprocess

Height threshold T = 4.915236 {p<0.05 (FWE)}

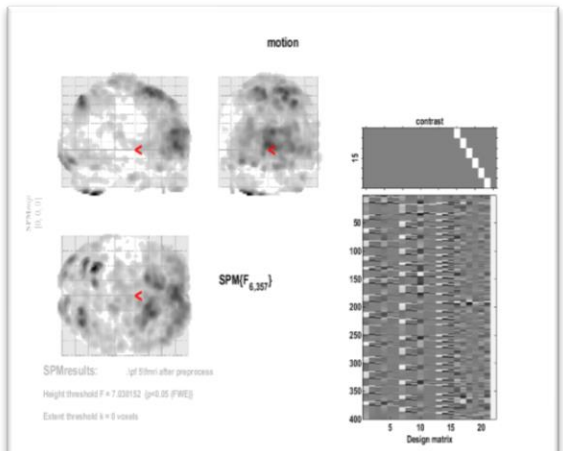
Extent threshold k = 0 voxels



Because we also completed the bonus assignment from portfolio 5, we had a design matrix that contained more columns. Therefore we have completed the steps again.

1. Report the output coordinate table for each of the 14 contrasts, both significant and non-significant.

All tables:



SPMresults: spf 59mri after preprocess

Height threshold F = 7.030152 {p=0.05 (FWE)}

Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	*c*	$p_{FWE-corr}$	$q_{FDR-corr}$	k_E	p_{uncorr}	$p_{FWE-corr}$	$q_{FDR-corr}$	*F*	$(Z_\equiv)$	p_{uncorr}	
		0.000	0.000	499	0.000	0.000	0.000	17.48	Inf	0.000	-34 58 -48
						0.000	0.000	11.36	6.84	0.000	-38 64 -24
						0.000	0.000	11.14	6.83	0.000	-44 58 -32
		0.000	0.000	101	0.000	0.000	0.000	16.80	Inf	0.000	-52 36 -50
						0.000	0.000	11.94	6.77	0.000	-52 64 -24
						0.000	0.003	9.91	6.14	0.000	-52 42 -34
		0.000	0.000	865	0.000	0.000	0.000	15.73	Inf	0.000	66 -68 -10
						0.000	0.000	12.97	7.21	0.000	66 -44 -10
						0.000	0.000	12.78	7.16	0.000	56 -58 -16
		0.000	0.000	473	0.000	0.000	0.000	14.22	7.59	0.000	-40 -44 64
						0.000	0.000	12.13	6.94	0.000	-42 -56 56
		0.000	0.000	179	0.000	0.000	0.000	12.89	7.18	0.000	62 -36 26
						0.000	0.001	10.62	6.41	0.000	54 -32 36
		0.000	0.000	20	0.004	0.000	0.000	11.61	6.76	0.000	4 66 -22
		0.000	0.000	133	0.000	0.000	0.000	11.00	6.55	0.000	-32 16 -40
						0.001	0.004	8.70	5.84	0.000	-44 16 -40
		0.000	0.001	37	0.000	0.000	0.000	10.79	6.47	0.000	26 -16 -14
		0.000	0.000	154	0.000	0.000	0.001	10.58	6.40	0.000	24 -58 -16

table shows 3 local maxima more than 8.0mm apart

Height threshold: F = 7.03, p = 0.000 (0.050)

Extent threshold: k = 0 voxels

Expected voxels per cluster, <k> = 2.012

Expected number of clusters, <c> = 0.05

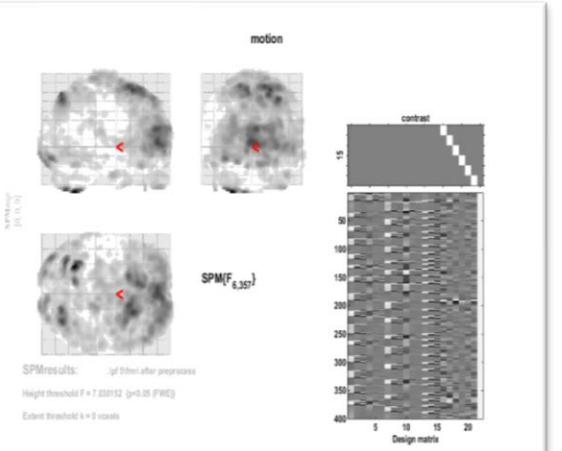
FWEp: 7.030, FDRp: 8.522, FWEc: 1, FDRc: 11

Degrees of freedom = [6.0, 357.0]

FWHM = 9.6 9.6 9.3 mm mm mm; 4.8 4.8 4.7 (voxels)

Volume: 1846464 = 230808 voxels = 1992.5 resels

Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 107.60 voxels)



SPMresults: spf 59mri after preprocess

Height threshold F = 7.030152 {p=0.05 (FWE)}

Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	*c*	$p_{FWE-corr}$	$q_{FDR-corr}$	k_E	p_{uncorr}	$p_{FWE-corr}$	$q_{FDR-corr}$	*F*	$(Z_\equiv)$	p_{uncorr}	
						0.001	0.034	8.75	5.87	0.000	20 -76 -18
		0.000	0.000	55	0.000	0.000	0.001	10.23	6.27	0.000	60 -14 -12
						0.005	0.112	8.11	5.61	0.000	64 -24 -14
		0.000	0.000	43	0.000	0.000	0.003	9.85	6.12	0.000	32 -8 -36
		0.000	0.000	141	0.000	0.000	0.004	9.79	6.10	0.000	32 -52 -36
						0.001	0.018	9.01	5.74	0.000	44 -42 -18
						0.003	0.064	8.38	5.53	0.000	36 -60 -58
		0.000	0.000	86	0.000	0.000	0.004	9.79	6.10	0.000	-62 -70 6
						0.008	0.174	7.84	5.31	0.000	-58 -76 10
		0.000	0.000	44	0.000	0.000	0.005	9.69	6.06	0.000	-16 -58 2
		0.000	0.000	24	0.002	0.000	0.007	9.52	5.99	0.000	-50 -24 60
		0.001	0.035	12	0.019	0.000	0.008	9.41	5.95	0.000	-10 -94 32
		0.000	0.001	31	0.001	0.000	0.008	9.40	5.95	0.000	2 -16 56
		0.000	0.000	50	0.000	0.000	0.012	9.21	5.87	0.000	36 14 -20
						0.019	0.395	7.49	5.13	0.000	44 16 -22
		0.001	0.020	15	0.010	0.000	0.014	9.15	5.85	0.000	-44 -12 -38
		0.000	0.000	40	0.000	0.001	0.015	9.12	5.83	0.000	12 -76 16
		0.000	0.001	31	0.001	0.001	0.015	9.11	5.83	0.000	24 6 -16

table shows 3 local maxima more than 8.0mm apart

Height threshold: F = 7.03, p = 0.000 (0.050)

Extent threshold: k = 0 voxels

Expected voxels per cluster, <k> = 2.012

Expected number of clusters, <c> = 0.05

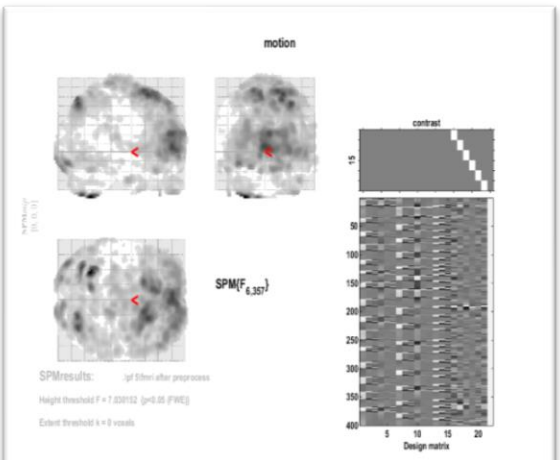
FWEp: 7.030, FDRp: 8.522, FWEc: 1, FDRc: 11

Degrees of freedom = [6.0, 357.0]

FWHM = 9.6 9.6 9.3 mm mm mm; 4.8 4.8 4.7 (voxels)

Volume: 1846464 = 230808 voxels = 1992.5 resels

Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 107.60 voxels)



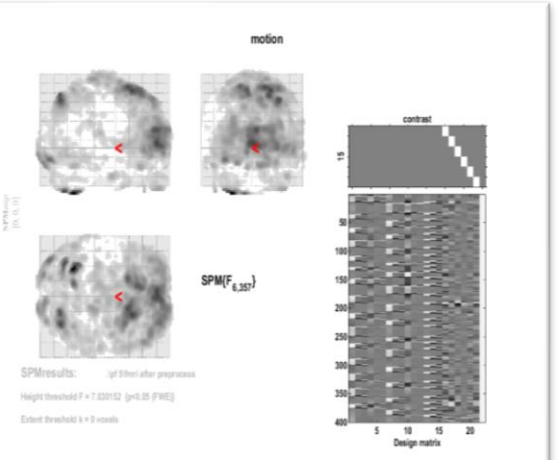
Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	k_E	p_{uncorr}	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	F	$(Z_\equiv)$	p_{uncorr}	
		0.000	0.000	92	0.000	0.001	0.017	9.04	5.80	0.000	-2 -44 24
						0.001	0.022	8.93	5.75	0.000	-2 -50 16
		0.000	0.000	40	0.000	0.001	0.019	8.98	5.78	0.000	36 -16 34
		0.001	0.035	12	0.019	0.001	0.020	8.96	5.77	0.000	22 -56 6
		0.000	0.000	46	0.000	0.001	0.022	8.91	5.75	0.000	16 -34 22
		0.000	0.000	43	0.000	0.001	0.023	8.89	5.74	0.000	12 -92 24
		0.000	0.005	23	0.002	0.001	0.024	8.88	5.74	0.000	-42 -12 62
		0.011	0.252	3	0.206	0.001	0.027	8.81	5.71	0.000	-8 -104 16
		0.002	0.043	9	0.038	0.001	0.034	8.71	5.67	0.000	10 8 -16
		0.011	0.252	3	0.206	0.002	0.043	8.59	5.61	0.000	10 -70 -50
		0.001	0.030	13	0.015	0.002	0.048	8.42	5.55	0.000	28 -36 -24
		0.001	0.035	12	0.019	0.003	0.063	8.40	5.53	0.000	-44 -74 44
		0.000	0.006	22	0.003	0.003	0.065	8.38	5.53	0.000	16 -98 8
		0.002	0.043	9	0.038	0.004	0.088	8.24	5.47	0.000	-10 -86 -30
		0.004	0.120	6	0.082	0.004	0.101	8.17	5.43	0.000	44 -16 -18
		0.001	0.020	15	0.010	0.005	0.111	8.12	5.42	0.000	-32 10 10
		0.001	0.042	11	0.023	0.005	0.112	8.12	5.41	0.000	62 -32 46
		0.011	0.252	3	0.206	0.005	0.121	8.08	5.40	0.000	-42 0 -48

table shows 3 local maxima more than 8.0mm apart

Height threshold: F = 7.03, p = 0.000 (0.050)
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 2.012
Expected number of clusters, <c> = 0.05
FWEp: 7.030, FDRp: 8.522, FWEc: 1, FDRc: 11

Degrees of freedom = [6.0, 357.0]
FWHM = 9.6 9.6 9.3 mm mm mm; 4.8 4.8 4.7 (voxels)
Volume: 1846464 = 230808 voxels = 1992.5 resels
Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 107.60 voxels)



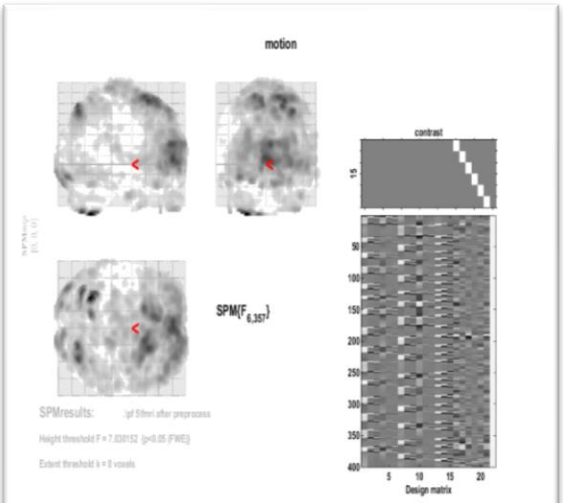
Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	k_E	p_{uncorr}	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	F	$(Z_\equiv)$	p_{uncorr}	
		0.000	0.014	17	0.007	0.006	0.144	7.99	5.34	0.000	-44 -34 22
		0.033	0.337	2	0.300	0.007	0.156	7.95	5.34	0.000	40 -58 -30
		0.000	0.008	20	0.004	0.007	0.157	7.95	5.34	0.000	34 -36 44
						0.012	0.259	7.69	5.22	0.000	40 -36 36
		0.033	0.337	2	0.300	0.007	0.167	7.92	5.32	0.000	6 -32 16
		0.003	0.100	7	0.062	0.008	0.172	7.90	5.32	0.000	-40 -30 -26
		0.002	0.043	9	0.038	0.008	0.175	7.89	5.31	0.000	-50 -62 8
		0.004	0.120	6	0.082	0.009	0.191	7.84	5.29	0.000	54 34 -40
		0.004	0.104	5	0.109	0.011	0.236	7.74	5.25	0.000	68 -28 -22
		0.003	0.100	7	0.062	0.011	0.236	7.74	5.25	0.000	2 24 -8
		0.008	0.201	4	0.148	0.012	0.254	7.70	5.23	0.000	4 14 -22
		0.004	0.120	6	0.082	0.014	0.306	7.61	5.19	0.000	-58 -12 8
		0.004	0.120	6	0.082	0.015	0.327	7.58	5.18	0.000	-54 28 14
		0.024	0.448	1	0.468	0.016	0.347	7.55	5.16	0.000	-64 -16 36
		0.024	0.448	1	0.468	0.016	0.347	7.55	5.16	0.000	18 -100 24
		0.033	0.337	2	0.300	0.017	0.363	7.53	5.15	0.000	36 -72 -50
		0.008	0.201	4	0.148	0.020	0.417	7.46	5.12	0.000	40 -74 16
		0.006	0.154	5	0.109	0.023	0.449	7.40	5.09	0.000	-16 -22 22

table shows 3 local maxima more than 8.0mm apart

Height threshold: F = 7.03, p = 0.000 (0.050)
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 2.012
Expected number of clusters, <c> = 0.05
FWEp: 7.030, FDRp: 8.522, FWEc: 1, FDRc: 11

Degrees of freedom = [6.0, 357.0]
FWHM = 9.6 9.6 9.3 mm mm mm; 4.8 4.8 4.7 (voxels)
Volume: 1846464 = 230808 voxels = 1992.5 resels
Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 107.60 voxels)



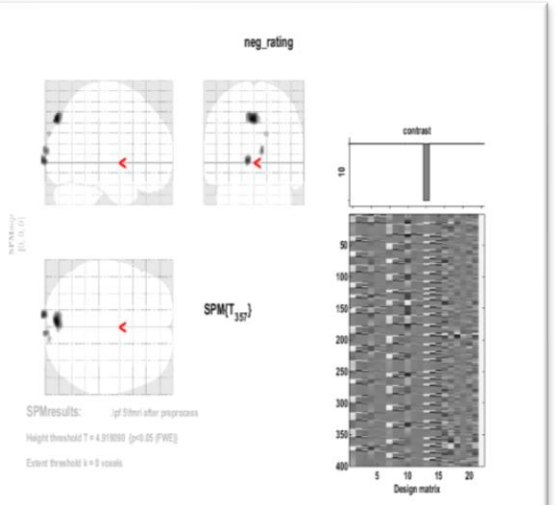
Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	k_E	p_{uncorr}	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	F	(Z_E)	p_{uncorr}	
		0.011	0.252	3	0.204	0.026	0.536	7.33	5.06	0.000	-52 16 -22
		0.011	0.252	3	0.204	0.028	0.569	7.31	5.05	0.000	-4 -16 64
		0.024	0.468	1	0.468	0.028	0.578	7.30	5.04	0.000	-48 24 40
		0.015	0.337	2	0.300	0.029	0.591	7.28	5.04	0.000	-26 -12 60
		0.011	0.252	3	0.204	0.030	0.624	7.27	5.03	0.000	48 -28 0
		0.015	0.337	2	0.300	0.034	0.692	7.21	5.00	0.000	-30 24 -24
		0.024	0.468	1	0.468	0.041	0.833	7.12	4.96	0.000	34 0 -48
		0.024	0.468	1	0.468	0.042	0.842	7.11	4.96	0.000	-52 22 -34
		0.024	0.468	1	0.468	0.042	0.847	7.11	4.96	0.000	50 -12 6
		0.024	0.468	1	0.468	0.044	0.872	7.09	4.95	0.000	44 -40 30
		0.024	0.468	1	0.468	0.047	0.943	7.06	4.93	0.000	-8 -64 38

table shows 3 local maxima more than 8.0mm apart

Height threshold: F = 7.83, p = 0.000 (0.050)
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 2.012
Expected number of clusters, <c> = 0.05
FWEp: 7.834, FDRp: 8.522, FWEc: 1, FDRc: 11

Degrees of freedom = [6.0, 357.0]
FWHM = 9.6 9.6 9.3 mm mm mm; 4.8 4.8 4.7 (voxels)
Volume: 1646464 = 230808 voxels = 1992.5 resels
Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 107.60 voxels)



Statistics: *p-values adjusted for search volume*

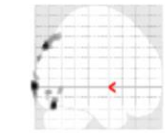
set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	k_E	p_{uncorr}	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	T	(Z_E)	p_{uncorr}	
0.000	5	0.000	0.000	147	0.000	0.000	0.005	6.37	6.20	0.000	-6 -88 42
		0.000	0.001	48	0.001	0.000	0.010	6.10	5.95	0.000	-10 -104 0
		0.000	0.005	33	0.003	0.002	0.052	5.68	5.54	0.000	8 -102 10
		0.003	0.044	12	0.051	0.017	0.417	5.17	5.08	0.000	14 -98 28
		0.029	0.547	1	0.547	0.037	0.733	4.99	4.91	0.000	-54 28 -32

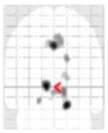
table shows 3 local maxima more than 8.0mm apart

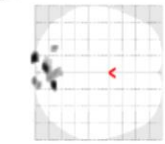
Height threshold: T = 4.92, p = 0.000 (0.050)
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 3.105
Expected number of clusters, <c> = 0.05
FWEp: 4.919, FDRp: 6.102, FWEc: 1, FDRc: 33

Degrees of freedom = [1.0, 357.0]
FWHM = 9.6 9.6 9.3 mm mm mm; 4.8 4.8 4.7 (voxels)
Volume: 1646464 = 230808 voxels = 1992.5 resels
Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 107.60 voxels)

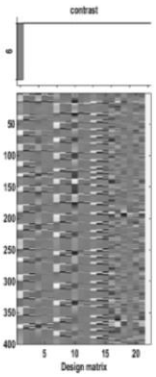
neg_story1







SPM{T_{357}}



SPMresults: spf 5fmri after preprocess

Height threshold T = 4.918080 (p<0.05 (FWE))

Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE-corr}$	$q_{FDR-corr}$	k_E	p_{uncorr}	$p_{FWE-corr}$	$q_{FDR-corr}$	T	$(Z_\equiv)$	p_{uncorr}	
0.000	9	0.000	0.000	65	0.000	0.000	0.000	6.94	6.71	0.000	16 -76 -20
		0.000	0.000	105	0.000	0.000	0.000	6.91	6.69	0.000	-12 -104 0
		0.000	0.000	258	0.000	0.000	0.001	6.79	6.58	0.000	-2 -88 40
						0.002	0.006	5.63	5.51	0.000	0 -92 14
						0.002	0.006	5.61	5.49	0.000	4 -76 48
		0.000	0.000	59	0.000	0.000	0.043	5.92	5.78	0.000	12 -102 -8
						0.035	0.090	5.01	4.92	0.000	10 -100 -14
		0.000	0.000	25	0.008	0.001	0.076	5.70	5.58	0.000	16 -90 28
		0.000	0.004	32	0.003	0.002	0.076	5.69	5.56	0.000	-22 -76 -16
		0.000	0.001	54	0.000	0.003	0.086	5.56	5.44	0.000	-2 -84 -6
						0.024	0.144	5.08	4.99	0.000	-6 -86 -14
		0.001	0.018	19	0.018	0.007	0.200	5.36	5.25	0.000	8 -68 -4
		0.000	0.004	34	0.003	0.010	0.241	5.29	5.19	0.000	16 -100 8

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.92, p = 0.000 (0.050)

Extent threshold: k = 0 voxels

Expected voxels per cluster, <k> = 3.105

Expected number of clusters, <c> = 0.05

FWEp: 4.919, FDRp: 5.657, FWEc: 19, FDRc: 19

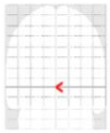
Degrees of freedom = [1.0, 357.0]

FWHM = 9.6 9.6 9.3 mm mm mm; 4.8 4.8 4.7 (voxels)

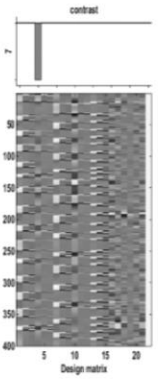
Volume: 1846464 = 230808 voxels = 1992.5 resels

Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 107.60 voxels)

neg_story1rating



SPM{T_{357}}



SPMresults: spf 5fmri after preprocess

Height threshold T = 4.918080 (p<0.05 (FWE))

Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE-corr}$	$q_{FDR-corr}$	k_E	p_{uncorr}	$p_{FWE-corr}$	$q_{FDR-corr}$	T	$(Z_\equiv)$	p_{uncorr}	

no suprathreshold clusters

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.92, p = 0.000 (0.050)

Extent threshold: k = 0 voxels

Expected voxels per cluster, <k> = 3.105

Expected number of clusters, <c> = 0.05

FWEp: 4.919, FDRp: Inf, FWEc: Inf, FDRc: Inf

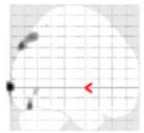
Degrees of freedom = [1.0, 357.0]

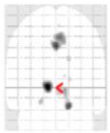
FWHM = 9.6 9.6 9.3 mm mm mm; 4.8 4.8 4.7 (voxels)

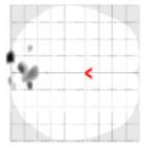
Volume: 1846464 = 230808 voxels = 1992.5 resels

Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 107.60 voxels)

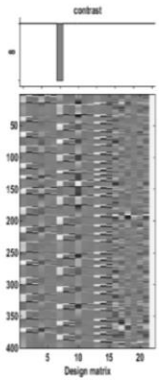
neg_story2







SPM(T_{357})



SPMresults: :pf 59mri after preprocess

Height threshold T = 4.919090 (p=0.05 (FWE))

Extent threshold k = 0 voxels

Statistics: ***p-values adjusted for search volume***

set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE-corr}$	$q_{FDR-corr}$	k_E	p_{uncorr}	$p_{FWE-corr}$	$q_{FDR-corr}$	T	($Z_\equiv$)	p_{uncorr}	
0.000	11	0.000	0.000	115	0.000	0.000	0.000	6.98	6.74	0.000	-14 -102 0
		0.000	0.000	272	0.000	0.000	0.005	6.43	6.25	0.000	-2 -88 40
						1.000	0.032	5.93	5.79	0.000	2 -74 48
		0.000	0.007	36	0.002	0.000	0.008	6.26	6.09	0.000	14 -74 -20
		0.000	0.009	32	0.003	0.003	0.165	5.55	5.43	0.000	10 -104 -6
						0.021	0.466	5.12	5.03	0.000	12 -100 -14
		0.001	0.043	17	0.023	0.007	0.309	5.38	5.27	0.000	-22 -76 -16
		0.001	0.043	18	0.020	0.011	0.443	5.27	5.16	0.000	4 -48 -6
		0.008	0.241	6	0.153	0.022	0.666	5.12	5.02	0.000	16 -98 26
		0.021	0.496	2	0.406	0.037	0.854	5.00	4.91	0.000	10 -102 10
		0.012	0.329	4	0.239	0.037	0.854	4.99	4.91	0.000	14 -100 6
		0.029	0.547	1	0.547	0.042	0.908	4.96	4.87	0.000	2 -54 60
		0.029	0.547	1	0.547	0.046	0.908	4.94	4.84	0.000	-2 -94 -6

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.92, p = 0.000 (0.050)

Extent threshold: k = 0 voxels

Expected voxels per cluster, <k> = 3.105

Expected number of clusters, <c> = 0.05

FWEp: 4.919, FDRp: 5.934, FWEc: 1, FDRc: 17

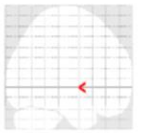
Degrees of freedom = [1.0, 357.0]

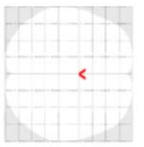
FWHM = 9.6 9.6 9.3 mm mm mm; 4.8 4.8 4.7 (voxels)

Volume: 1646464 = 230808 voxels = 1992.5 resels

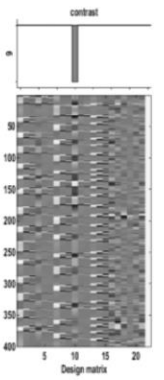
Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 107.60 voxels)

neg_story2rating





SPM(T_{357})



SPMresults: :pf 59mri after preprocess

Height threshold T = 4.919090 (p=0.05 (FWE))

Extent threshold k = 0 voxels

Statistics: ***p-values adjusted for search volume***

set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE-corr}$	$q_{FDR-corr}$	k_E	p_{uncorr}	$p_{FWE-corr}$	$q_{FDR-corr}$	T	($Z_\equiv$)	p_{uncorr}	

no suprathreshold clusters

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.92, p = 0.000 (0.050)

Extent threshold: k = 0 voxels

Expected voxels per cluster, <k> = 3.105

Expected number of clusters, <c> = 0.05

FWEp: 4.919, FDRp: Inf, FWEc: Inf, FDRc: Inf

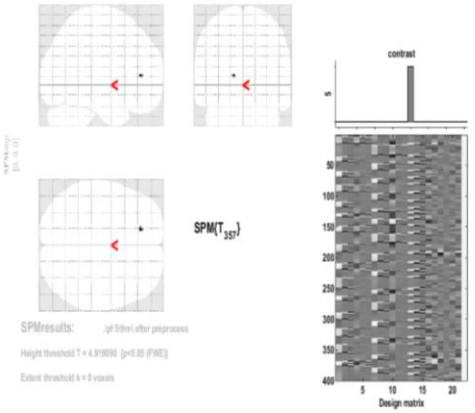
Degrees of freedom = [1.0, 357.0]

FWHM = 9.6 9.6 9.3 mm mm mm; 4.8 4.8 4.7 (voxels)

Volume: 1646464 = 230808 voxels = 1992.5 resels

Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 107.60 voxels)

pos_rating



Statistics: *p-values adjusted for search volume*

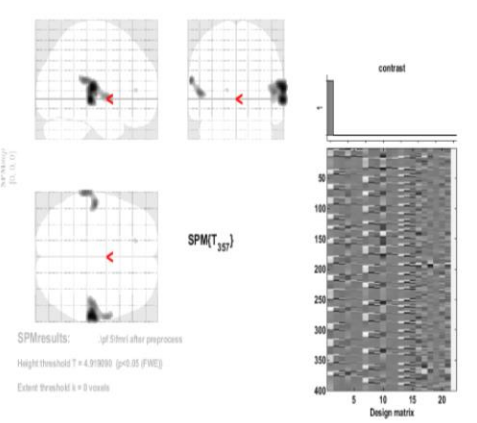
cluster-level				peak-level					mm mm mm
$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	k_E	p_{uncorr}	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	T	$\{Z_E\}$	p_{uncorr}	
0.012	0.239	4	0.239	0.014	0.272	5.22	5.12	0.000	-14 38 8

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.92, p = 0.000 (0.050)
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 3.105
Expected number of clusters, <c> = 0.05
FWEp: 4.919, FDRp: Inf, FWEc: 4, FDRc: Inf

Degrees of freedom = [1.0, 357.0]
FWHM = 9.6 9.6 9.3 mm mm mm; 4.8 4.8 4.7 (voxels)
Volume: 1846464 = 230808 voxels = 1992.5 resels
Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 107.60 voxels)

pos_story1



Statistics: *p-values adjusted for search volume*

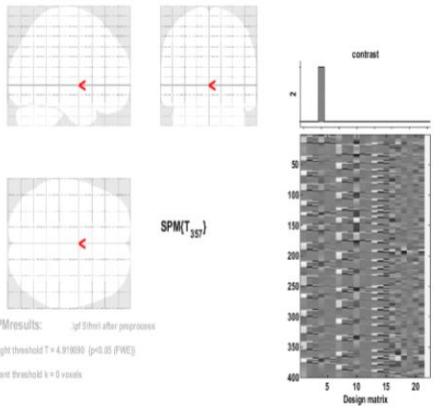
set-level		cluster-level				peak-level					mm mm mm
p	c	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	k_E	p_{uncorr}	$p_{FWE\text{-}corr}$	$q_{FDR\text{-}corr}$	T	$\{Z_E\}$	p_{uncorr}	
0.000	3	0.000	0.000	898	0.000	0.000	0.000	9.84	Inf	0.000	64 -22 10
						0.000	0.000	9.73	Inf	0.000	64 -24 -2
						0.000	0.000	7.36	7.13	0.000	52 -22 6
		0.000	0.000	212	0.000	0.000	0.000	7.74	7.44	0.000	-52 -18 6
						0.000	0.000	7.49	7.20	0.000	-64 -32 10
		0.010	0.190	5	0.190	0.014	0.271	5.22	5.12	0.000	-14 38 8

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.92, p = 0.000 (0.050)
Extent threshold: k = 0 voxels
Expected voxels per cluster, <k> = 3.105
Expected number of clusters, <c> = 0.05
FWEp: 4.919, FDRp: 0.900, FWEc: 5, FDRc: 212

Degrees of freedom = [1.0, 357.0]
FWHM = 9.6 9.6 9.3 mm mm mm; 4.8 4.8 4.7 (voxels)
Volume: 1846464 = 230808 voxels = 1992.5 resels
Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 107.60 voxels)

pos_story1rating



SPMresults: /gf 5/hnri after preprocess

Height threshold T = 4.919690 (p<0.05 (FWE))

Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	*c*	$p_{FWE-corr}$	$q_{FDR-corr}$	k_E	p_{uncorr}	$p_{FWE-corr}$	$q_{FDR-corr}$	*T*	(Z_E)	p_{uncorr}	

no suprathreshold clusters

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.92, p = 0.000 (0.050)

Extent threshold: k = 0 voxels

Expected voxels per cluster, <k> = 3.105

Expected number of clusters, <c> = 0.05

FWEp: 4.919, FDRp: Inf, FWEc: Inf, FDRc: Inf

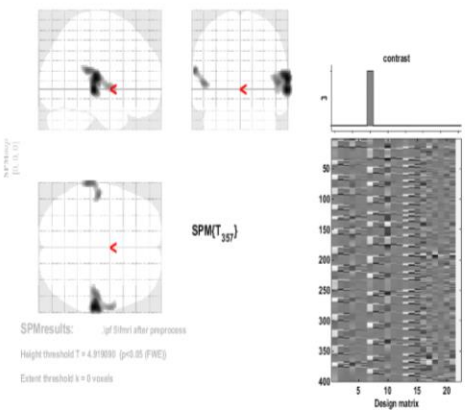
Degrees of freedom = [1.0, 357.0]

FWHM = 9.6 9.6 9.3 mm mm mm; 4.8 4.8 4.7 (voxels)

Volume: 1946464 = 238806 voxels = 1992.5 resels

Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 107.60 voxels)

pos_story2



SPMresults: /gf 5/hnri after preprocess

Height threshold T = 4.919690 (p<0.05 (FWE))

Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm
p	*c*	$p_{FWE-corr}$	$q_{FDR-corr}$	k_E	p_{uncorr}	$p_{FWE-corr}$	$q_{FDR-corr}$	*T*	(Z_E)	p_{uncorr}	
0.001	2	0.000	0.000	957	0.000	0.000	0.000	9.93	Inf	0.000	64 -24 -2
						0.000	0.000	9.73	Inf	0.000	64 -22 10
						0.000	0.000	7.55	7.27	0.000	50 -22 6
		0.000	0.000	217	0.000	0.000	0.000	7.82	7.51	0.000	-66 -32 18
						0.000	0.000	7.44	7.17	0.000	-52 -18 4

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.92, p = 0.000 (0.050)

Extent threshold: k = 0 voxels

Expected voxels per cluster, <k> = 3.105

Expected number of clusters, <c> = 0.05

FWEp: 4.919, FDRp: 6.870, FWEc: 217, FDRc: 217

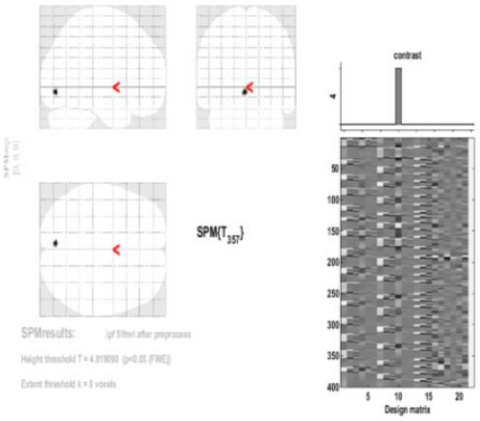
Degrees of freedom = [1.0, 357.0]

FWHM = 9.6 9.6 9.3 mm mm mm; 4.8 4.8 4.7 (voxels)

Volume: 1946464 = 238806 voxels = 1992.5 resels

Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 107.60 voxels)

pos_story2rating



SPMresults: spf 5fmri after preprocess

Height threshold T = 4.919090 (p=0.05 (FWE))

Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

	cluster-level				peak-level					mm mm mm		
	$p_{FWE-corr}$	$q_{FDR-corr}$	k_E	p_{uncorr}	$p_{FWE-corr}$	$q_{FDR-corr}$	T	(Z_p)	p_{uncorr}			
	0.002	0.032	15	0.032	0.005	0.096	5.45	5.34	0.000	-4	-80	-8

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.92, p = 0.000 (0.050)

Extent threshold: k = 0 voxels

Expected voxels per cluster, <k> = 3.105

Expected number of clusters, <c> = 0.05

FWEp: 4.919, FDRp: Inf, FWEc: 15, FDRc: 15

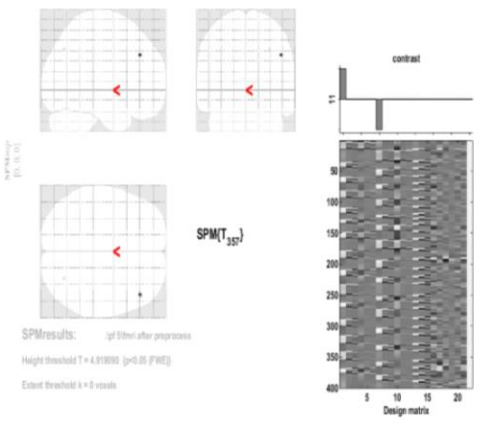
Degrees of freedom = [1.0, 357.0]

FWHM = 9.6 9.6 9.3 mm mm mm; 4.8 4.8 4.7 (voxels)

Volume: 1646464 = 230800 voxels = 1992.5 resels

Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 107.60 voxels)

story1-story2



SPMresults: spf 5fmri after preprocess

Height threshold T = 4.919090 (p=0.05 (FWE))

Extent threshold k = 0 voxels

Statistics: *p-values adjusted for search volume*

set-level		cluster-level				peak-level					mm mm mm		
p	c	$p_{FWE-corr}$	$q_{FDR-corr}$	k_E	p_{uncorr}	$p_{FWE-corr}$	$q_{FDR-corr}$	T	(Z_p)	p_{uncorr}			
0.001	2	0.012	0.478	4	0.239	0.025	0.940	5.09	4.99	0.000	46	34	34
		0.029	0.547	1	0.547	0.047	0.940	4.93	4.83	0.000	30	-70	40

table shows 3 local maxima more than 8.0mm apart

Height threshold: T = 4.92, p = 0.000 (0.050)

Extent threshold: k = 0 voxels

Expected voxels per cluster, <k> = 3.105

Expected number of clusters, <c> = 0.05

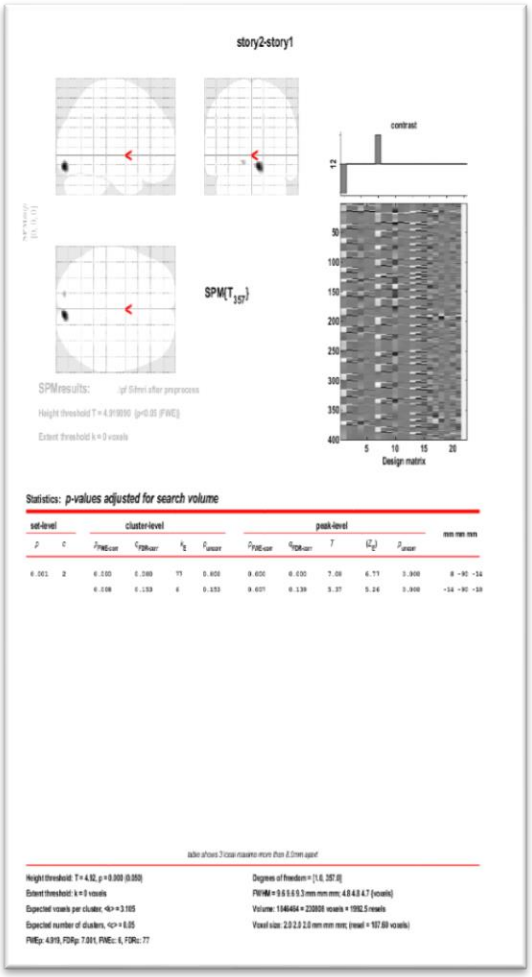
FWEp: 4.919, FDRp: Inf, FWEc: 1, FDRc: Inf

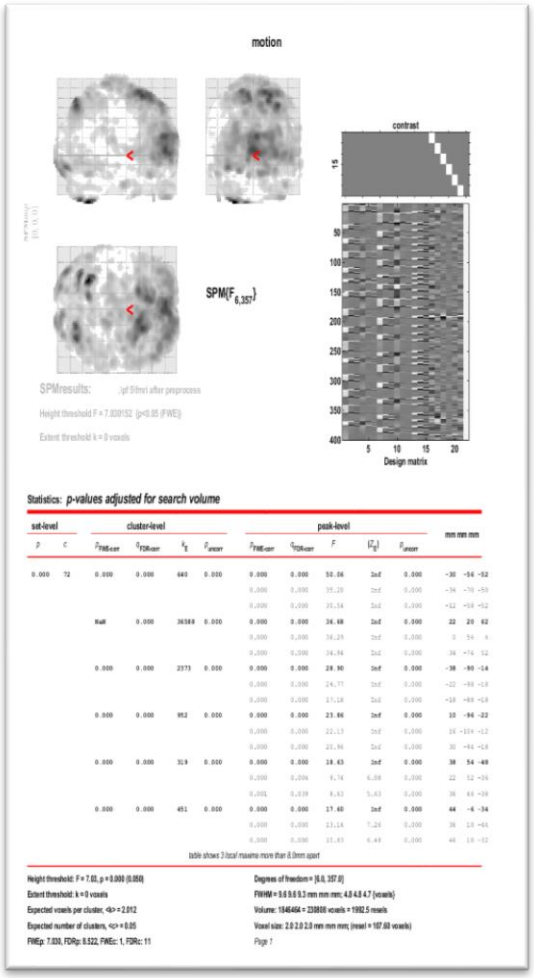
Degrees of freedom = [1.0, 357.0]

FWHM = 9.6 9.6 9.3 mm mm mm; 4.8 4.8 4.7 (voxels)

Volume: 1646464 = 230800 voxels = 1992.5 resels

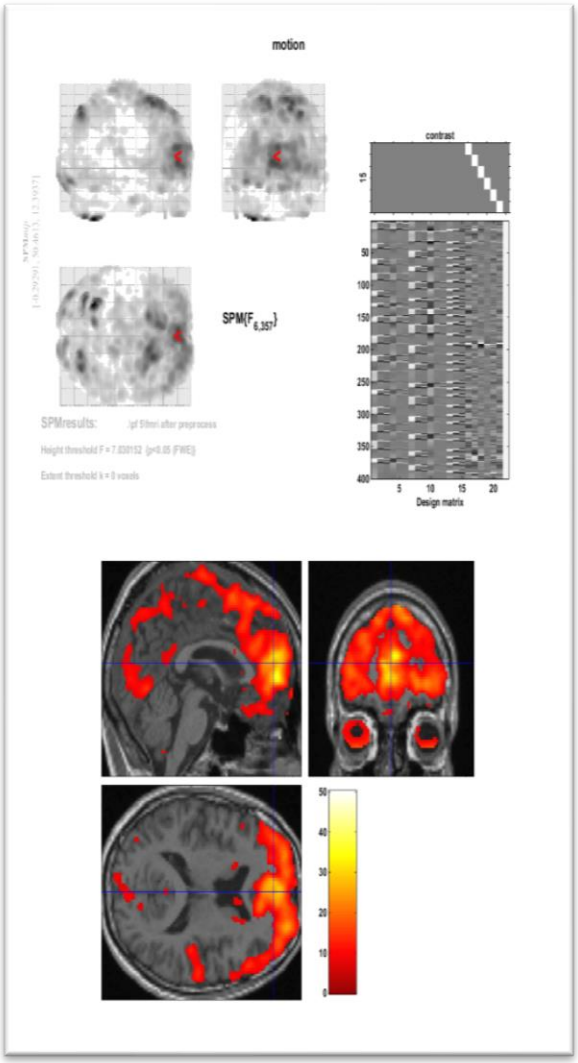
Voxel size: 2.0 2.0 2.0 mm mm mm; (resel = 107.60 voxels)

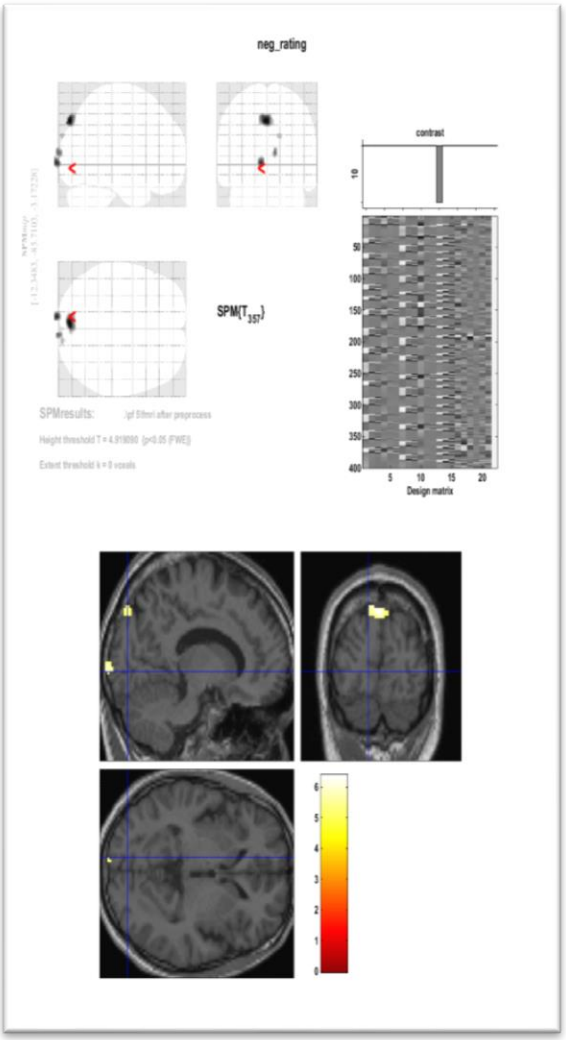


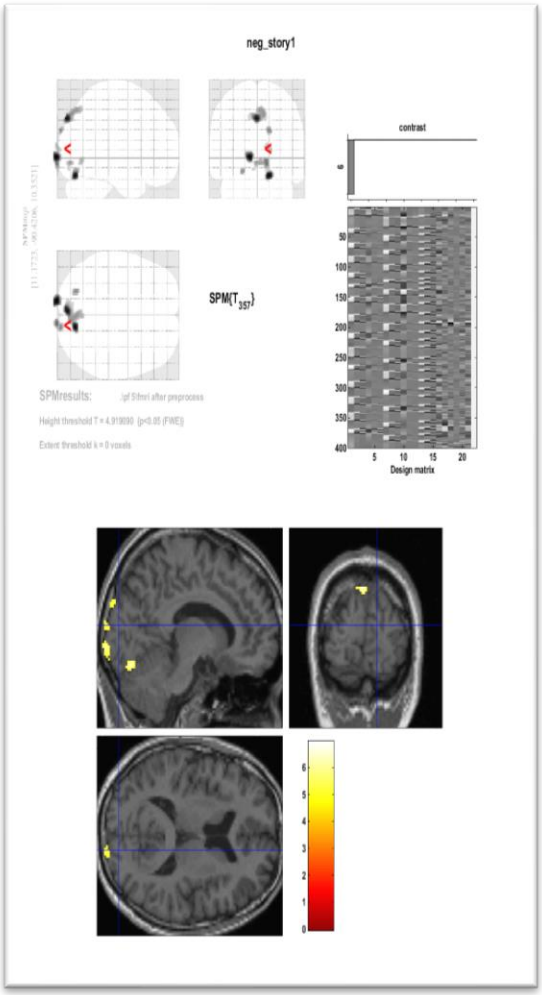


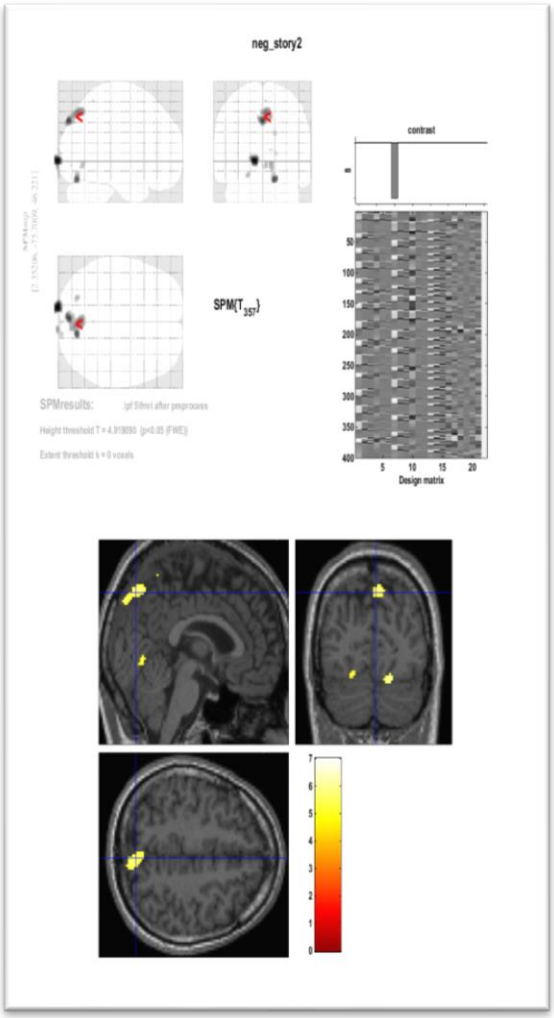
2. For significant contrasts, include a nice overlayed image, displaying the most significant effect.

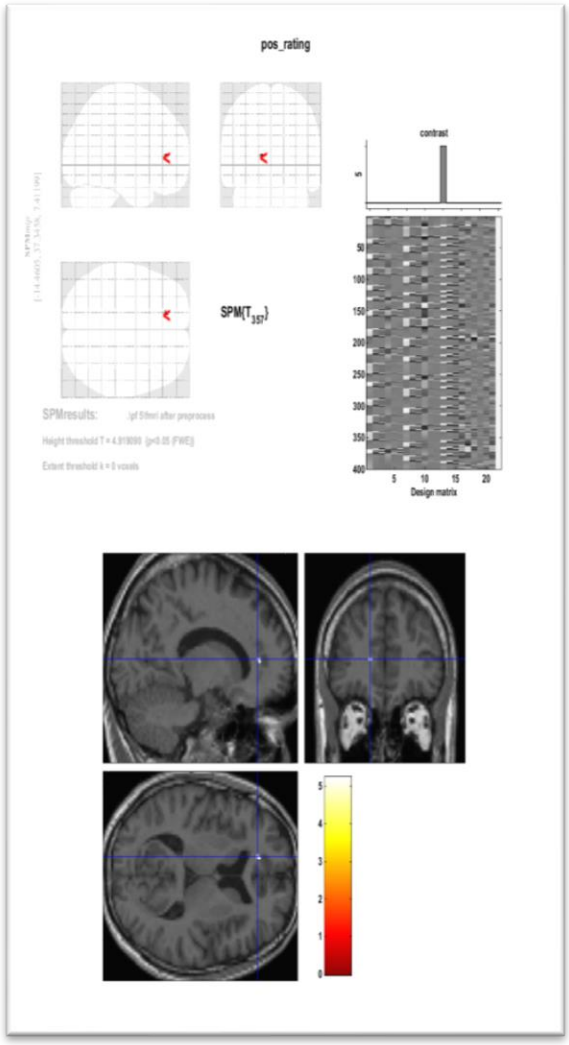
Overlays to significant contrasts for the new design matrix created in assignment 6 in portfolio 5:

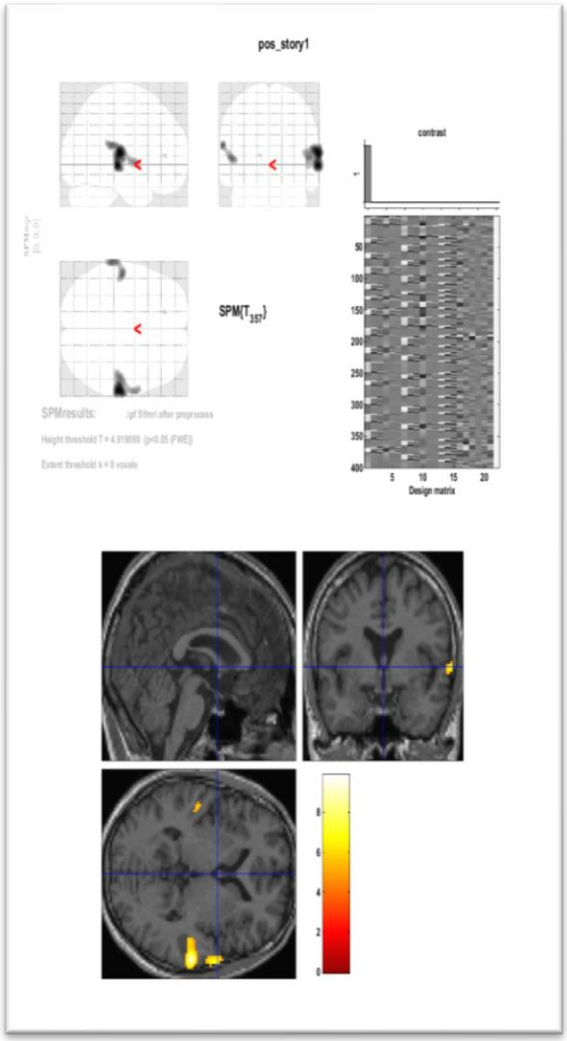

motion
contrast
SPM(F6,357)
SPMresults:
Design matrix

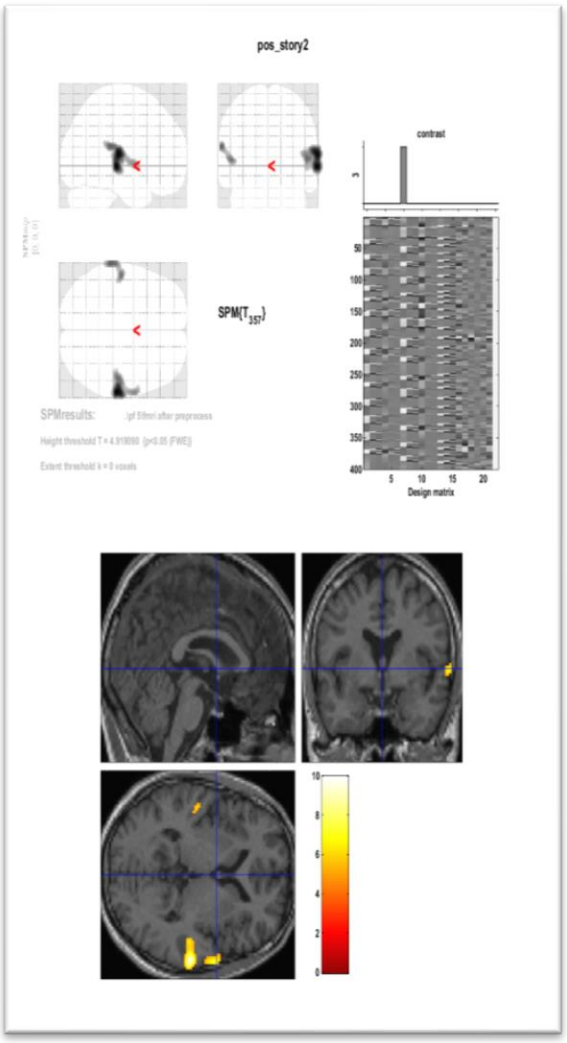

neg_rating
contrast
SPM(T357)
SPMresults:
Design matrix

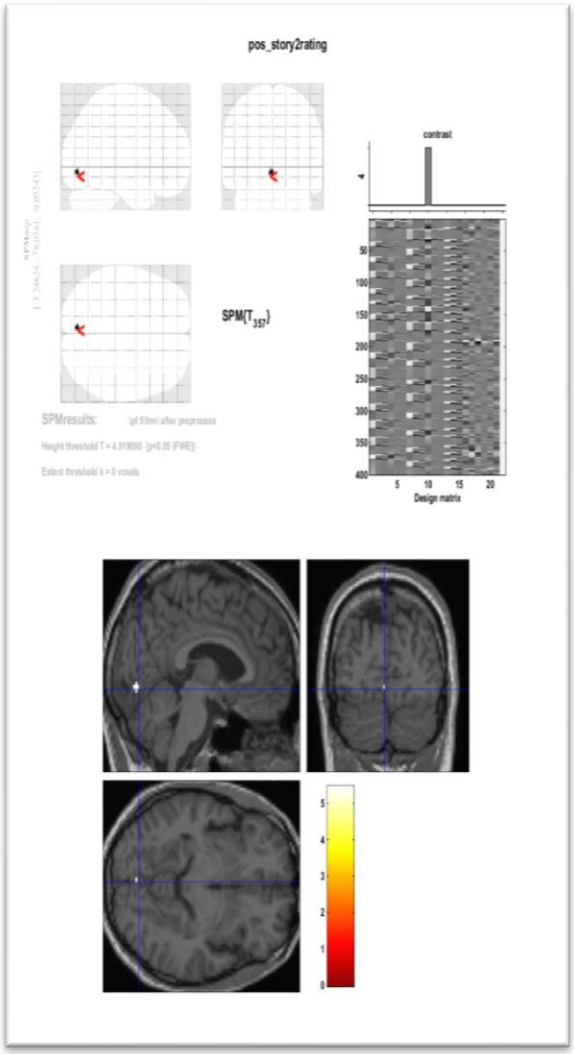

neg_story1
contrast
SPM(T357)
SPMresults:
Design matrix

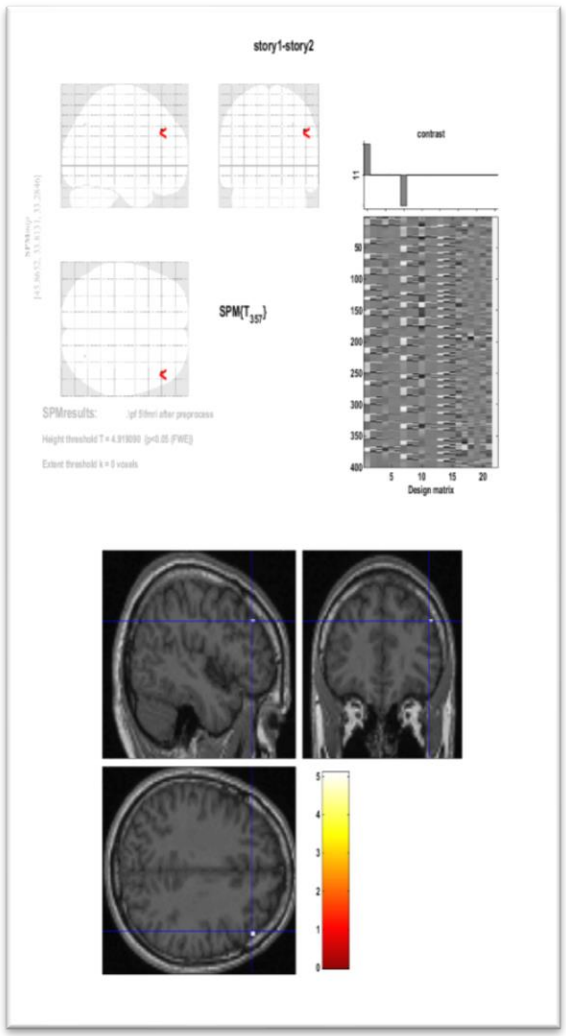

neg_story2
contrast
SPM(T357)
SPMresults:
Design matrix

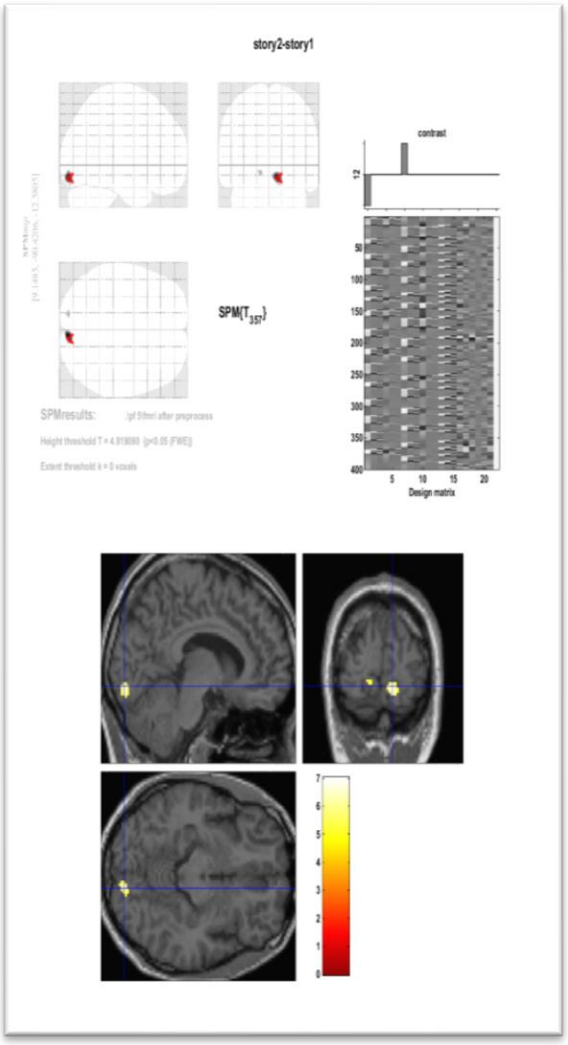

pos_rating
contrast
SPM{T357}
SPMresults:
Design matrix


pos_story1
contrast
SPM{T357}
SPMresults:
Design matrix


pos_story2
contrast
SPM(T357)
SPMresults:
Design matrix


pos_story2rating
contrast
SPM(T357)
SPMresults:
Design matrix





3.

How many voxels are included in your analysis?

- There are 230.808 voxels included in our analysis.

Recall that a p-value reflects the probability of finding a specific effect, given that the null hypothesis is true. If all voxels were independent, how many voxels would then on average appear to be activated by chance in this analysis if using an uncorrected threshold of p<0.001?

- In order to figure this out we multiply our number of voxels with our p-value. 230.808 * 0.001 = 230,81. Therefore, by chance and without corrections we should on average find 230,81 significant voxels.