

Supporting Information

Food and Non-alcoholic Beverage Marketing in Children and Adults: A Systematic Review and ALE Meta-analysis of fMRI Studies

Authors

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Main analysis cluster FEW p 0.01_C05_1k_clust

Mask:

Reference Space = MNI
Dimensions = 77x96x79
Number of within-brain voxels = 229781
Mask Size = More Conservative (Smaller)

Foci:

Coordinate System = MNI
File of foci coordinates = Main analysis.txt
Number of foci = 73
Number of experiments = 8
Total number of subjects = 371

ALE - Random Effects, Turkeltaub Non-Additive (HBM, 2012):

File of ALE voxels = Main analysis cluster FWE p 0.01_ALE.nii
FWHM minimum value = 8.512538742459038
FWHM median value = 9.081322119956662
FWHM maximum value = 9.380085631017138
Minimum ALE score = 1.4E-45
Maximum ALE score = 0.016209327

P Values: Eickhoff (HBM, 2009)

File of P values = Main analysis cluster FWE p 0.01_P.nii
Minimum P value = 3.656951E-6

Thresholding:

Threshold Method = Cluster-level Inference
Thresholding Value = 0.05
Thresholding Permutations = 1000
Cluster-Forming Method = Uncorrected P value
Cluster-Forming Value = 0.01
Volume > Threshold = 3696 mm³
Chosen min. cluster size = 1624 mm³
Thresholded ALE image = Main analysis cluster FWE p 0.01_C05_1k_ALE.nii

Cluster Analysis:

#1: 2040 mm³ from (18,-98,6) to (36,-72,18) centered at (28.1,-84.3,12.1) with 3 peaks
with a max value of 0.0161 ALE, 3.861287E-6 P, 4.47 Z at (32,-78,10)

Labels:

Hemisphere: 100% Right Cerebrum
Lobe: 100% Occipital Lobe
Gyrus: 49.4% Cuneus, 45.9% Middle Occipital Gyrus, 4.3% Lingual Gyrus
Tissue Type: 94.5% White Matter, 5.5% Gray Matter
Cell Type: 3.5% Brodmann area 17, 1.2% Brodmann area 18

#2: 1656 mm³ from (48,-28,22) to (66,-8,40) centered at (57.5,-16.5,32) with 3 peaks with a max value of 0.0123 ALE, 5.564831E-5 P, 3.86 Z at (60,-12,28)

Labels:

Hemisphere: 100% Right Cerebrum
Lobe: 66.2% Parietal Lobe, 33.8% Frontal Lobe
Gyrus: 79.7% Postcentral Gyrus, 16.9% Precentral Gyrus, 3.4% Inferior Parietal Lobule
Tissue Type: 83.6% White Matter, 16.4% Gray Matter
Cell Type: 9.7% Brodmann area 2, 4.3% Brodmann area 3, 1.9% Brodmann area 40

Experiment Table:

[1 0 0 0 1 3 0 0]
[0 0 1 0 1 1 0 1]

Contributors to cluster #1

1 foci from //Bruce et al. 2014
1 foci from //Gearhardt et al. 2014
3 foci from //Gearhardt et al. 2020

Contributors to cluster #2

1 foci from //Burger et al. 2014
1 foci from //Gearhardt et al. 2014
1 foci from //Gearhardt et al. 2020
1 foci from //Rapuano et al. 2016

LOO1 p0.01 1000perm_C05_1k_clust

Mask:

Reference Space = MNI
Dimensions = 77x96x79
Number of within-brain voxels = 229781
Mask Size = More Conservative (Smaller)

Foci:

Coordinate System = MNI
File of foci coordinates = LOO1.txt
Number of foci = 69
Number of experiments = 7
Total number of subjects = 354

ALE - Random Effects, Turkeltaub Non-Additive (HBM, 2012):

File of ALE voxels = LOO1 p0.01 1000perm_ALE.nii
FWHM minimum value = 8.512538742459038
FWHM median value = 8.973124960180026
FWHM maximum value = 9.137264222884284
Minimum ALE score = 1.4E-45
Maximum ALE score = 0.016209327

P Values: Eickhoff (HBM, 2009)

File of P values = LOO1 p0.01 1000perm_P.nii
Minimum P value = 3.3366348E-6

Thresholding:

Threshold Method = Cluster-level Inference
Thresholding Value = 0.05

Thresholding Permutations = 1000
Cluster-Forming Method = Uncorrected P value
Cluster-Forming Value = 0.01
Volume > Threshold = 1760 mm³
Chosen min. cluster size = 1544 mm³
Thresholded ALE image = LOO1 p0.01 1000perm_C05_1k_ALE.nii

Cluster Analysis:

#1: 1760 mm³ from (48,-28,22) to (66,-8,40) centered at (57.4,-16.6,32) with 3 peaks
with a max value of 0.0123 ALE, 4.9252616E-5 P, 3.89 Z at (60,-12,28)

Labels:

Hemisphere: 100% Right Cerebrum
Lobe: 65.9% Parietal Lobe, 34.1% Frontal Lobe
Gyrus: 77.7% Postcentral Gyrus, 18.2% Precentral Gyrus, 4.1% Inferior Parietal Lobule
Tissue Type: 82.7% White Matter, 16.8% Gray Matter
Cell Type: 10% Brodmann area 2, 4.1% Brodmann area 3, 2.3% Brodmann area 40

Experiment Table:

[0 1 0 1 1 0 1]

Contributors to cluster #1

1 foci from //Burger et al. 2014
1 foci from //Gearhardt et al. 2014
1 foci from //Gearhardt et al. 2020
1 foci from //Rapuano et al. 2016

LOO2 p0.01 1000perms_C05_1k_clust

Mask:

Reference Space = MNI
Dimensions = 77x96x79
Number of within-brain voxels = 229781
Mask Size = More Conservative (Smaller)

Foci:

Coordinate System = MNI
File of foci coordinates = LOO2.txt
Number of foci = 72
Number of experiments = 7
Total number of subjects = 348

ALE - Random Effects, Turkeltaub Non-Additive (HBM, 2012):

File of ALE voxels = LOO2 p0.01 1000perms_ALE.nii
FWHM minimum value = 8.512538742459038
FWHM median value = 8.973124960180026
FWHM maximum value = 9.380085631017138
Minimum ALE score = 1.4E-45
Maximum ALE score = 0.016209327

P Values: Eickhoff (HBM, 2009)

File of P values = LOO2 p0.01 1000perms_P.nii
Minimum P value = 3.5397195E-6

Thresholding:

Threshold Method = Cluster-level Inference
Thresholding Value = 0.05
Thresholding Permutations = 1000
Cluster-Forming Method = Uncorrected P value
Cluster-Forming Value = 0.01
Volume > Threshold = 3696 mm³

Chosen min. cluster size = 1624 mm³
Thresholded ALE image = LOO2 p0.01 1000perms_C05_1k_ALE.nii

Cluster Analysis:

#1: 2040 mm³ from (18,-98,6) to (36,-72,18) centered at (28.1,-84.3,12.1) with 3 peaks
with a max value of 0.0161 ALE, 3.7342115E-6 P, 4.48 Z at (32,-78,10)

Labels:

Hemisphere: 100% Right Cerebrum
Lobe: 100% Occipital Lobe
Gyrus: 49.4% Cuneus, 45.9% Middle Occipital Gyrus, 4.3% Lingual Gyrus
Tissue Type: 94.5% White Matter, 5.5% Gray Matter
Cell Type: 3.5% Brodmann area 17, 1.2% Brodmann area 18

#2: 1656 mm³ from (48,-28,22) to (66,-8,40) centered at (57.5,-16.5,32) with 3 peaks
with a max value of 0.0123 ALE, 5.3690583E-5 P, 3.87 Z at (60,-12,28)

Labels:

Hemisphere: 100% Right Cerebrum
Lobe: 66.2% Parietal Lobe, 33.8% Frontal Lobe
Gyrus: 79.7% Postcentral Gyrus, 16.9% Precentral Gyrus, 3.4% Inferior Parietal Lobule
Tissue Type: 83.6% White Matter, 16.4% Gray Matter
Cell Type: 9.7% Brodmann area 2, 4.3% Brodmann area 3, 1.9% Brodmann area 40

Experiment Table:

[1 0 0 1 3 0 0]
[0 1 0 1 1 0 1]

Contributors to cluster #1

1 foci from //Bruce et al. 2014
1 foci from //Gearhardt et al. 2014
3 foci from //Gearhardt et al. 2020

Contributors to cluster #2

1 foci from //Burger et al. 2014
1 foci from //Gearhardt et al. 2014
1 foci from //Gearhardt et al. 2020
1 foci from //Rapuano et al. 2016

LOO3 p0.01 1000 perms_C05_1k_clust

Mask:

Reference Space = MNI
Dimensions = 77x96x79
Number of within-brain voxels = 229781
Mask Size = More Conservative (Smaller)

Foci:

Coordinate System = MNI
File of foci coordinates = LOO3.txt
Number of foci = 62
Number of experiments = 7
Total number of subjects = 346

ALE - Random Effects, Turkeltaub Non-Additive (HBM, 2012):

File of ALE voxels = LOO3 p0.01 1000 perms_ALE.nii
FWHM minimum value = 8.512538742459038
FWHM median value = 8.973124960180026
FWHM maximum value = 9.380085631017138
Minimum ALE score = 1.4E-45
Maximum ALE score = 0.016209327

P Values: Eickhoff (HBM, 2009)

File of P values = LOO3 p0.01 1000 perms_P.nii
Minimum P value = 2.419724E-6

Thresholding:

Threshold Method = Cluster-level Inference
Thresholding Value = 0.05
Thresholding Permutations = 1000
Cluster-Forming Method = Uncorrected P value
Cluster-Forming Value = 0.01
Volume > Threshold = 2304 mm³
Chosen min. cluster size = 1384 mm³
Thresholded ALE image = LOO3 p0.01 1000 perms_C05_1k_ALE.nii

Cluster Analysis:

#1: 2304 mm³ from (18,-98,6) to (36,-72,18) centered at (28.2,-84.3,12.2) with 3 peaks
with a max value of 0.0161 ALE, 2.577252E-6 P, 4.56 Z at (32,-78,10)

Labels:

Hemisphere: 100% Right Cerebrum
Lobe: 100% Occipital Lobe
Gyrus: 49.3% Cuneus, 46.5% Middle Occipital Gyrus, 3.8% Lingual Gyrus
Tissue Type: 94.1% White Matter, 5.9% Gray Matter
Cell Type: 3.5% Brodmann area 17, 1.4% Brodmann area 18, 1% Brodmann area 19

Experiment Table:

[1 0 0 1 3 0 0]

Contributors to cluster #1

1 foci from //Bruce et al. 2014
1 foci from //Gearhardt et al. 2014
3 foci from //Gearhardt et al. 2020

LOO4 p0.01 1000perms_C05_1k_clust

Mask:

Reference Space = MNI
Dimensions = 77x96x79
Number of within-brain voxels = 229781
Mask Size = More Conservative (Smaller)

Foci:

Coordinate System = MNI
File of foci coordinates = LOO4.txt
Number of foci = 68
Number of experiments = 7
Total number of subjects = 328

ALE - Random Effects, Turkeltaub Non-Additive (HBM, 2012):

File of ALE voxels = LOO4 p0.01 1000perms_ALE.nii
FWHM minimum value = 8.512538742459038
FWHM median value = 9.081322119956662
FWHM maximum value = 9.380085631017138
Minimum ALE score = 1.4E-45
Maximum ALE score = 0.016209327

P Values: Eickhoff (HBM, 2009)

File of P values = LOO4 p0.01 1000perms_P.nii
Minimum P value = 3.078396E-6

Thresholding:

Threshold Method = Cluster-level Inference
Thresholding Value = 0.05
Thresholding Permutations = 1000
Cluster-Forming Method = Uncorrected P value
Cluster-Forming Value = 0.01
Volume > Threshold = 3904 mm³
Chosen min. cluster size = 1616 mm³
Thresholded ALE image = LOO4 p0.01 1000perms_C05_1k_ALE.nii

Cluster Analysis:

#1: 2136 mm³ from (18,-98,6) to (36,-72,18) centered at (28.1,-84.3,12.1) with 3 peaks with a max value of 0.0161 ALE, 3.2565665E-6 P, 4.51 Z at (32,-78,10)

Labels:

Hemisphere: 100% Right Cerebrum
Lobe: 100% Occipital Lobe
Gyrus: 49.4% Cuneus, 46.1% Middle Occipital Gyrus, 4.1% Lingual Gyrus
Tissue Type: 94.8% White Matter, 5.2% Gray Matter
Cell Type: 3.4% Brodmann area 17, 1.1% Brodmann area 18

#2: 1768 mm³ from (48,-28,22) to (66,-8,40) centered at (57.4,-16.6,32) with 3 peaks with a max value of 0.0123 ALE, 4.8062968E-5 P, 3.9 Z at (60,-12,28)

Labels:

Hemisphere: 100% Right Cerebrum
Lobe: 66.1% Parietal Lobe, 33.9% Frontal Lobe
Gyrus: 77.8% Postcentral Gyrus, 18.1% Precentral Gyrus, 4.1% Inferior Parietal Lobule
Tissue Type: 82.8% White Matter, 16.7% Gray Matter
Cell Type: 10% Brodmann area 2, 4.1% Brodmann area 3, 2.3% Brodmann area 40

Experiment Table:

[1 0 0 1 3 0 0]
[0 0 1 1 1 0 1]

Contributors to cluster #1

1 foci from //Bruce et al. 2014
1 foci from //Gearhardt et al. 2014
3 foci from //Gearhardt et al. 2020

Contributors to cluster #2

1 foci from //Burger et al. 2014
1 foci from //Gearhardt et al. 2014
1 foci from //Gearhardt et al. 2020
1 foci from //Rapuno et al. 2016

LOO5 p0.01 1000perms_C05_1k_clust

Mask:

Reference Space = MNI
Dimensions = 77x96x79
Number of within-brain voxels = 229781
Mask Size = More Conservative (Smaller)

Foci:

Coordinate System = MNI
File of foci coordinates = LOO5.txt
Number of foci = 62
Number of experiments = 7
Total number of subjects = 341

ALE - Random Effects, Turkeltaub Non-Additive (HBM, 2012):

File of ALE voxels = LOO5 p0.01 1000perms_ALE.nii

FWHM minimum value = 8.512538742459038
FWHM median value = 9.081322119956662
FWHM maximum value = 9.380085631017138
Minimum ALE score = 1.4E-45
Maximum ALE score = 0.0144125875

P Values: Eickhoff (HBM, 2009)

File of P values = LOO5 p0.01 1000perms_P.nii
Minimum P value = 9.377668E-6

Thresholding:

Threshold Method = Cluster-level Inference
Thresholding Value = 0.05
Thresholding Permutations = 1000
Cluster-Forming Method = Uncorrected P value
Cluster-Forming Value = 0.01
Volume > Threshold = 1576 mm³
Chosen min. cluster size = 1352 mm³
Thresholded ALE image = LOO5 p0.01 1000perms_C05_1k_ALE.nii

Cluster Analysis:

#1: 1576 mm³ from (-42,-14,-6) to (-30,0,16) centered at (-36,-7.4,3.1) with 2 peaks
with a max value of 0.0144 ALE, 9.377668E-6 P, 4.28 Z at (-38,-6,0)

Labels:

Hemisphere: 100% Left Cerebrum

Lobe: 100% Sub-lobar

Gyrus: 45.2% Extra-Nuclear, 34.5% Insula, 14.7% Claustrum, 5.6% Lentiform Nucleus

Tissue Type: 78.2% White Matter, 21.8% Gray Matter

Cell Type: 5.6% Putamen, 1.5% Brodmann area 13

Experiment Table:

[0 0 3 0 1 0 0]

Contributors to cluster #1

3 foci from //Burger et al. 2014

1 foci from //Gearhardt et al. 2020

LOO6 p0.01 1000 perms_C05_1k_clust

Mask:

Reference Space = MNI

Dimensions = 77x96x79

Number of within-brain voxels = 229781

Mask Size = More Conservative (Smaller)

Foci:

Coordinate System = MNI

File of foci coordinates = LOO6.txt

Number of foci = 42

Number of experiments = 7

Total number of subjects = 200

ALE - Random Effects, Turkeltaub Non-Additive (HBM, 2012):

File of ALE voxels = LOO6 p0.01 1000 perms_ALE.nii

FWHM minimum value = 8.807048159883355

FWHM median value = 9.081322119956662

FWHM maximum value = 9.380085631017138

Minimum ALE score = 1.4E-45

Maximum ALE score = 0.0110760145

P Values: Eickhoff (HBM, 2009)

File of P values = LOO6 p0.01 1000 perms_P.nii

Minimum P value = 2.6496356E-5

Thresholding:

Threshold Method = Cluster-level Inference

Thresholding Value = 0.05

Thresholding Permutations = 1000

Cluster-Forming Method = Uncorrected P value

Cluster-Forming Value = 0.01

Volume > Threshold = 3608 mm³

Chosen min. cluster size = 1752 mm³

Thresholded ALE image = LOO6 p0.01 1000 perms_C05_1k_ALE.nii

Cluster Analysis:

#1: 1824 mm³ from (48,-28,26) to (62,-8,42) centered at (55.2,-18.6,34.7) with 3 peaks with a max value of 0.0101 ALE, 4.7665406E-5 P, 3.9 Z at (56,-20,36)

Labels:

Hemisphere: 100% Right Cerebrum

Lobe: 61.8% Parietal Lobe, 38.2% Frontal Lobe

Gyrus: 73.7% Postcentral Gyrus, 19.3% Precentral Gyrus, 7% Inferior Parietal Lobule

Tissue Type: 76.8% White Matter, 22.4% Gray Matter

Cell Type: 16.7% Brodmann area 2, 4.8% Brodmann area 40

#2: 1784 mm³ from (-58,-36,34) to (-38,-24,50) centered at (-46.2,-29,41.5) with 2 peaks with a max value of 0.0111 ALE, 2.6496356E-5 P, 4.04 Z at (-44,-30,44)

Labels:

Hemisphere: 100% Left Cerebrum

Lobe: 100% Parietal Lobe

Gyrus: 76.2% Inferior Parietal Lobule, 16.6% Postcentral Gyrus, 6.7% Sub-Gyral

Tissue Type: 55.2% Gray Matter, 39.9% White Matter

Cell Type: 43.5% Brodmann area 40, 11.7% Brodmann area 2

Experiment Table:

[0 0 1 0 1 0 1]

[0 0 2 0 1 0 0]

Contributors to cluster #1

1 foci from //Burger et al. 2014

1 foci from //Gearhardt et al. 2014

1 foci from //Rapuano et al. 2016

Contributors to cluster #2

2 foci from //Burger et al. 2014

1 foci from //Gearhardt et al. 2014

LOO7 p0.01 1000 perms_C05_1k_clust

Mask:

Reference Space = MNI

Dimensions = 77x96x79

Number of within-brain voxels = 229781

Mask Size = More Conservative (Smaller)

Foci:

Coordinate System = MNI

File of foci coordinates = LOO7.txt

Number of foci = 69

Number of experiments = 7

Total number of subjects = 354

ALE - Random Effects, Turkeltaub Non-Additive (HBM, 2012):

File of ALE voxels = LOO7 p0.01 1000 perms_ALE.nii
FWHM minimum value = 8.512538742459038
FWHM median value = 8.973124960180026
FWHM maximum value = 9.137264222884284
Minimum ALE score = 1.4E-45
Maximum ALE score = 0.016209327

P Values: Eickhoff (HBM, 2009)

File of P values = LOO7 p0.01 1000 perms_P.nii
Minimum P value = 3.3366348E-6

Thresholding:

Threshold Method = Cluster-level Inference
Thresholding Value = 0.05
Thresholding Permutations = 1000
Cluster-Forming Method = Uncorrected P value
Cluster-Forming Value = 0.01
Volume > Threshold = 1760 mm³
Chosen min. cluster size = 1536 mm³
Thresholded ALE image = LOO7 p0.01 1000 perms_C05_1k_ALE.nii

Cluster Analysis:

#1: 1760 mm³ from (48,-28,22) to (66,-8,40) centered at (57.4,-16.6,32) with 3 peaks
with a max value of 0.0123 ALE, 4.9252616E-5 P, 3.89 Z at (60,-12,28)

Labels:

Hemisphere: 100% Right Cerebrum
Lobe: 65.9% Parietal Lobe, 34.1% Frontal Lobe
Gyrus: 77.7% Postcentral Gyrus, 18.2% Precentral Gyrus, 4.1% Inferior Parietal Lobule
Tissue Type: 82.7% White Matter, 16.8% Gray Matter
Cell Type: 10% Brodmann area 2, 4.1% Brodmann area 3, 2.3% Brodmann area 40

Experiment Table:

[0 1 0 1 1 0 1]

Contributors to cluster #1

1 foci from //Burger et al. 2014
1 foci from //Gearhardt et al. 2014
1 foci from //Gearhardt et al. 2020
1 foci from //Rapuano et al. 2016

LOO8 p0.01 1000 perms_C05_1k_clust

Mask:

Reference Space = MNI
Dimensions = 77x96x79
Number of within-brain voxels = 229781
Mask Size = More Conservative (Smaller)

Foci:

Coordinate System = MNI
File of foci coordinates = LOO8.txt
Number of foci = 64
Number of experiments = 7
Total number of subjects = 334

ALE - Random Effects, Turkeltaub Non-Additive (HBM, 2012):

File of ALE voxels = LOO8 p0.01 1000 perms_ALE.nii
FWHM minimum value = 8.512538742459038

FWHM median value = 9.081322119956662
FWHM maximum value = 9.380085631017138
Minimum ALE score = 1.4E-45
Maximum ALE score = 0.016209327

P Values: Eickhoff (HBM, 2009)

File of P values = LOO8 p0.01 1000 perms_P.nii
Minimum P value = 2.6752784E-6

Thresholding:

Threshold Method = Cluster-level Inference
Thresholding Value = 0.05
Thresholding Permutations = 1000
Cluster-Forming Method = Uncorrected P value
Cluster-Forming Value = 0.01
Volume > Threshold = 2200 mm³
Chosen min. cluster size = 1504 mm³
Thresholded ALE image = LOO8 p0.01 1000 perms_C05_1k_ALE.nii

Cluster Analysis:

#1: 2200 mm³ from (18,-98,6) to (36,-72,18) centered at (28.2,-84.2,12.2) with 3 peaks
with a max value of 0.0161 ALE, 2.8385919E-6 P, 4.54 Z at (32,-78,10)

Labels:

Hemisphere: 100% Right Cerebrum

Lobe: 100% Occipital Lobe

Gyrus: 49.8% Cuneus, 45.8% Middle Occipital Gyrus, 4% Lingual Gyrus

Tissue Type: 94.9% White Matter, 5.1% Gray Matter

Cell Type: 3.3% Brodmann area 17, 1.1% Brodmann area 18

Experiment Table:

[1 0 0 0 1 3 0]

Contributors to cluster #1

1 foci from //Bruce et al. 2014

1 foci from //Gearhardt et al. 2014

3 foci from //Gearhardt et al. 2020