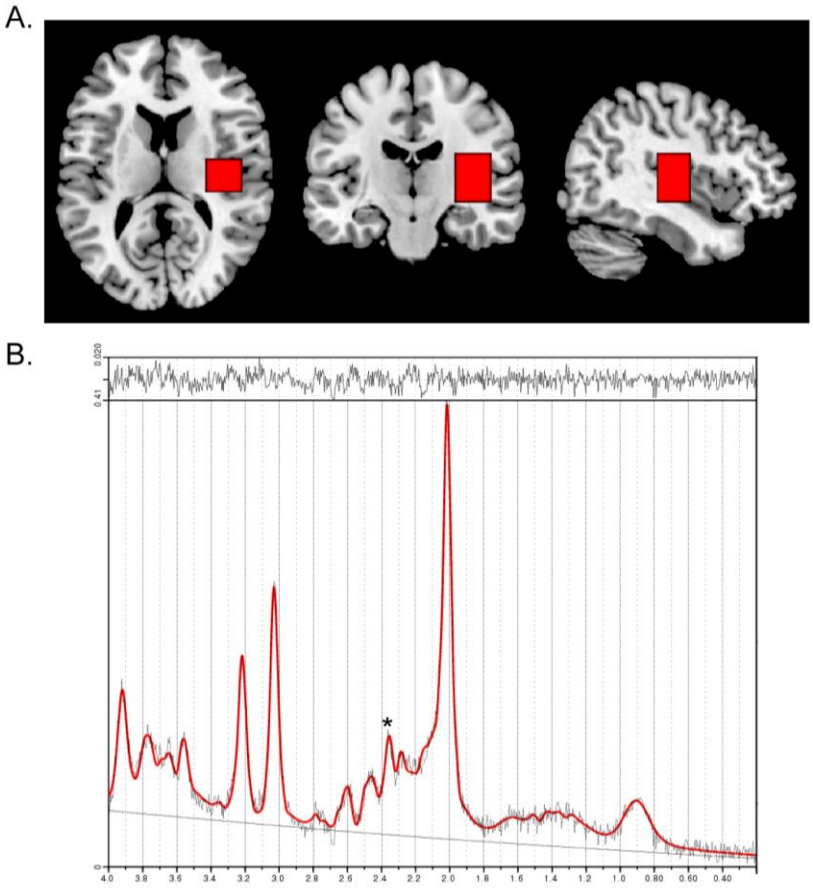
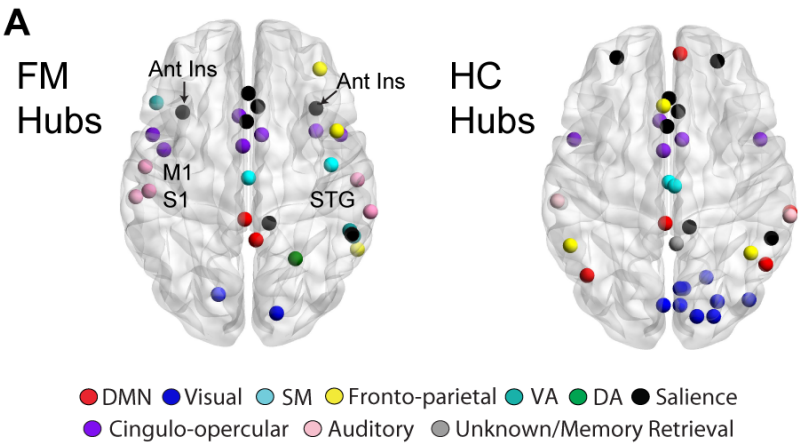
Supplementary Information

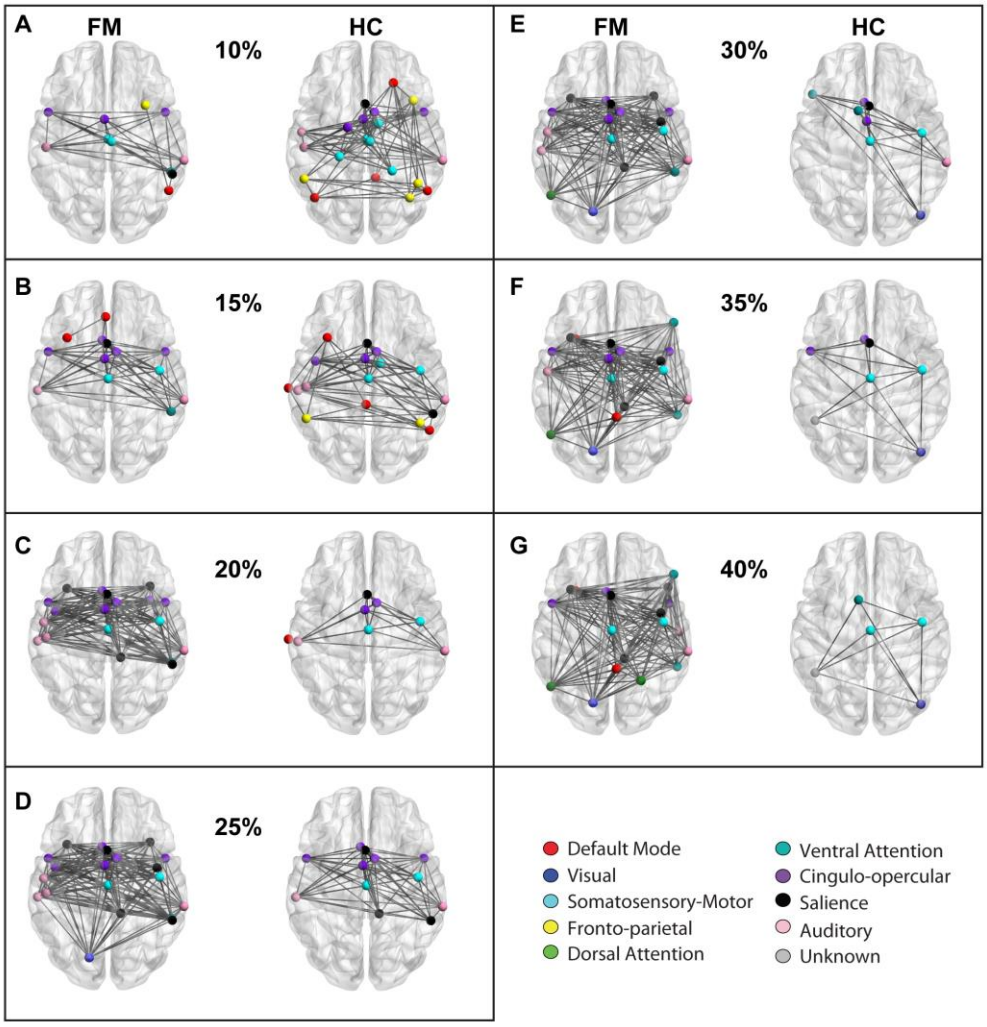
Supplementary Figures:



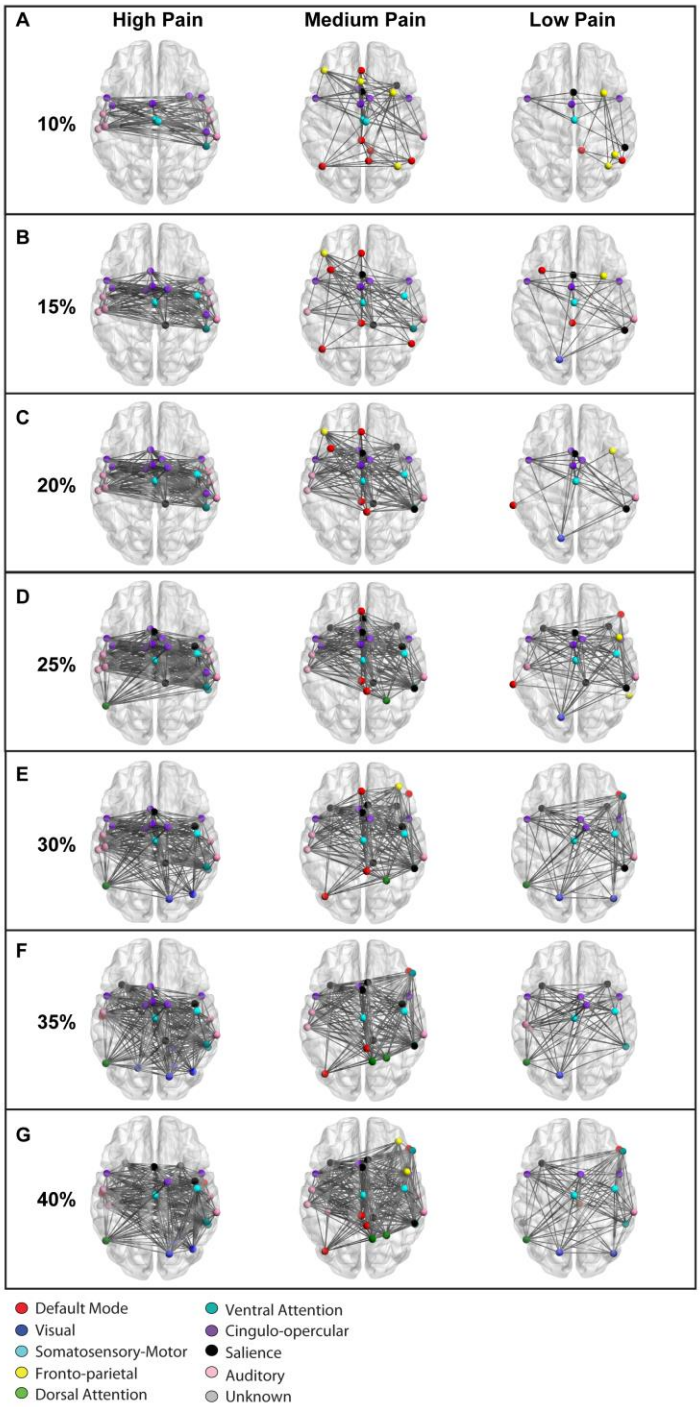
Supplementary Fig. 1: Right Posterior Insula ^{1}H-MRS Voxel Placement and Resulting Spectrum. The placement of the spectroscopic voxel in the right posterior insula is shown in (A) in axial, coronal and sagittal images. A representative spectrum fit with LCModel (red trace) is depicted in panel (B). The peak resonance for glutamate + glutamine (Glx) is marked with * at 2.35 parts per million. Glx concentrations were rescaled using the water peak and corrected for CSF.



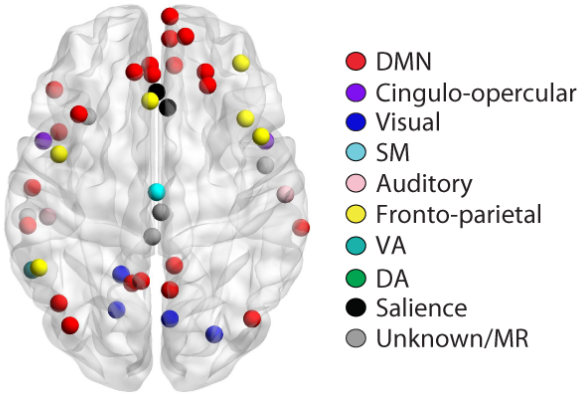
Supplementary Fig. 2: Hubs in FM (discovery) and HCs as measured with degree. Degree (the number of connections a node has) is another common measure of hub status. The degree based hubs in FM patients and HCs largely agreed with eigenvector centrality. The bilateral anterior insulae were hubs in FM, but not HCs. M1, S1 and STG were also hubs in FM patients. For a full list, see supplementary table 6.



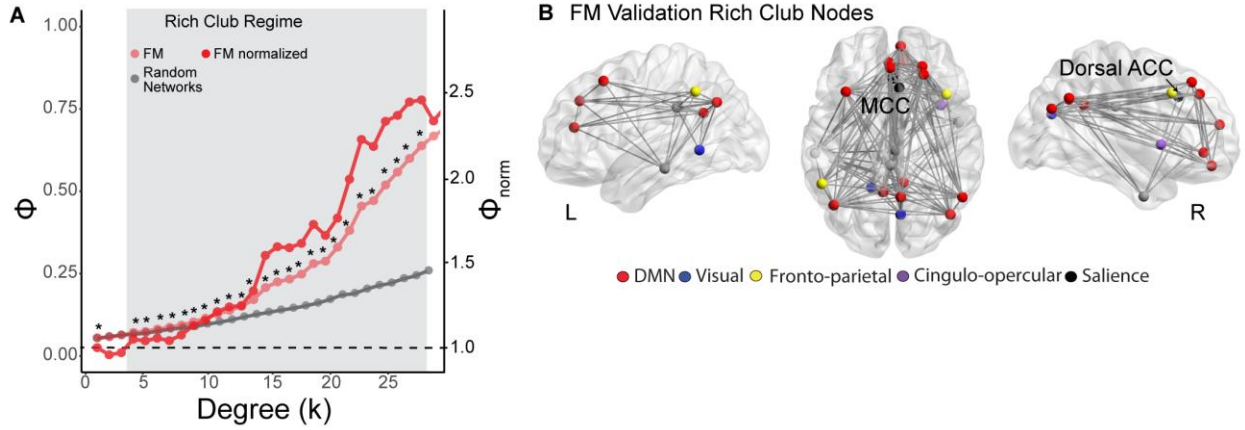
Supplementary Fig. 3: Rich Club Membership across thresholds in FM and HC. Rich club membership is depicted for FM and HC at each of the thresholds examined, 10-40% (A-G). As described in the main text, we determined statistical significance of the rich club coefficient, $\phi(k)$, at each level of k with permutation testing using 1000 random networks with similar degree distribution and density. The range of k in which $\phi(k)$ is significantly different from $\phi_{random}(k)$, and where the $\phi_{norm}(k)$ is greater than one, is the rich-club regime. Differences between FM and HC in $\phi(k)$ at each level of k in the rich-club regime were tested in SPSS using independent samples t-tests. This was repeated for each threshold and a Bonferroni correction was applied. There were no significant differences in the rich club coefficient between FM and HC, however rich club membership was different between groups. The anterior insulae was a member of the rich club in FM patients for network densities between 20 and 40%. For visualization, the rich clubs are displayed at the highest level of k that was significantly different from random networks for each threshold and each group independently (10%: FM k= 47, HC k = 45; 15%: FM k = 64, HC k = 62; 20%: FM k = 78, HC k = 82; 25%: FM k = 92, HC k = 95; 30%: FM k = 106, HC k = 111; 35%: FM k = 121, HC k = 126; 40%: FM k = 133, HC k = 142).



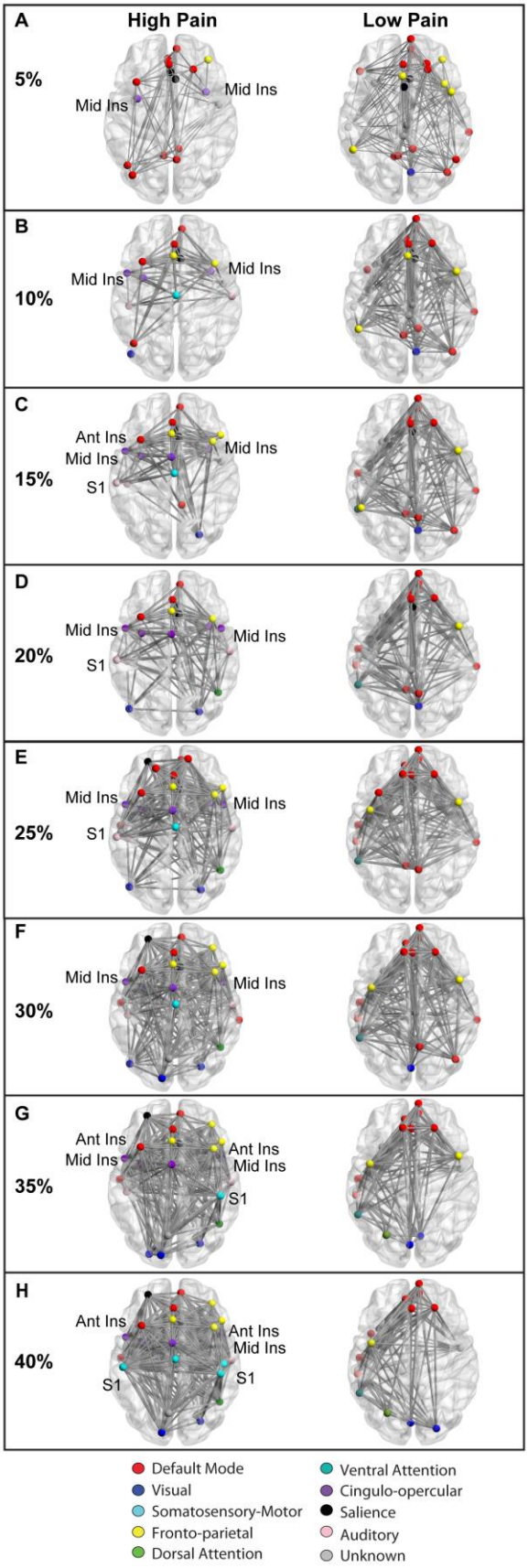
Supplementary Fig. 4: Rich Club Hubs in FM Tertiles across thresholds. For high, medium and low pain FM discovery cohort tertiles, the rich club membership is depicted for all other network densities examined (10-40%, A-G). Differences in the rich club coefficient, ϕ (k), for each threshold were tested as described in the main text using one-way ANOVAs and Bonferroni corrections were applied. There were no significant differences between the tertiles in the rich club coefficient, however rich club membership varied across the tertiles and was consistent with results at 5% density described in the main text. For visualization, the rich clubs are displayed at the same level of k detailed for the FM group in Supplementary Fig 3.



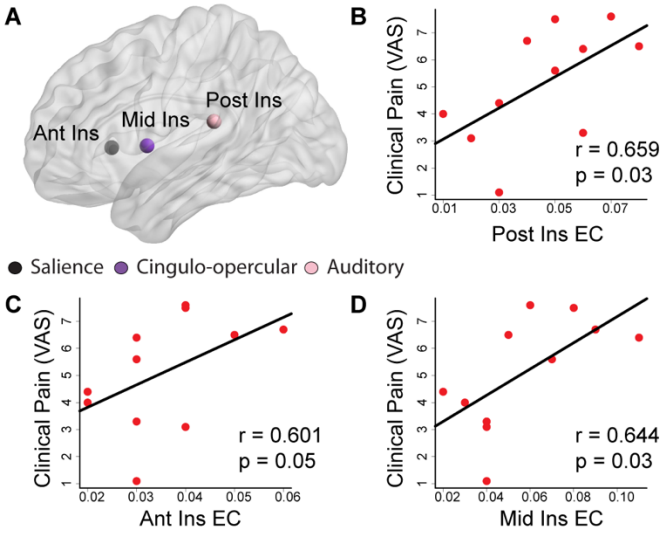
Supplementary Fig. 5. Hubs in validation FM cohort. Hubs were defined as nodes whose eigenvector centrality was one standard deviation above the group mean. The majority of hubs in the validation cohort were in the DMN. The right mid insula and bilateral STG were also hubs.



Supplementary Fig. 6. Rich Club Membership in FM validation cohort. (A) The FM validation cohort has significant rich club organization compared to random networks. The rich club regime (compared to random networks) for FM was k = 1 and between k = 4 and k = 28. Normalized rich club curves are also depicted which show an increasing ϕ_{norm} over a range of k. The rich club nodes for the FM validation cohort are depicted in (B) for k = 28, the highest significant k level. The validation FM rich club did not include the anterior insula, but the mid and anterior cingulate cortex were members of the rich club similar to the FM discovery cohort. The data depicted are from 5% network density; results are similar for other thresholds (data not shown). FM, fibromyalgia; ACC, anterior cingulate cortex; MCC, mid cingulate cortex; * FM significantly different from random networks


A
High Pain
Low Pain
5%
Mid Ins
Mid Ins
B
10%
Mid Ins
Mid Ins
C
15%
Ant Ins
Mid Ins
S1
Mid Ins
D
20%
Mid Ins
S1
Mid Ins
E
25%
Mid Ins
S1
Mid Ins
F
30%
Mid Ins
Mid Ins
G
35%
Ant Ins
Mid Ins
Ant Ins
Mid Ins
S1
H
40%
Ant Ins
S1
Ant Ins
Mid Ins
S1
Default Mode
Visual
Somatosensory-Motor
Fronto-parietal
Dorsal Attention
Ventral Attention
Cingulo-opercular
Salience
Auditory
Unknown

Supplementary Fig. 7. Rich Club Hubs in FM Validation High and Low pain groups across thresholds. For high and low pain FM validation cohort groups, the rich club membership is depicted for all network densities examined (5-40%, A-H). The mid insula is a member of the rich club only in the high pain group at 5% density. At higher densities, the mid insula, anterior insula, and S1 belong to the rich club of high pain FM patients. For visualization, the rich clubs are displayed at the same level of k detailed for the FM group in Supplementary Fig 3.



Supplementary Fig. 8. Replication of correlations between clinical pain and eigenvector centrality. In a novel sample of 11 FM patients, eigenvector centrality in the anterior (A), mid (B) and posterior insula (C) also positively correlated with clinical pain. EC, eigenvector centrality; VAS, visual analog scale.

Supplementary Tables:

Supplementary Table 1: A quick reference for relevant graph theory terminology

Term	Lay definition
Node	A point of connection in a network. In brain networks, a node can represent a neuron or an entire brain region.
Hub	An especially important node in the network (because the node has many connections or is central to information flow).
Rich Club	An organizational feature of networks wherein a subset of highly connected nodes (i.e. hubs) are more likely to be connected to each other than to nodes with few connections.
Eigenvector Centrality	The connectedness of a node plus the connectedness of that node's neighbors.
Degree	The number of connections a given node has to every other node in the network.
Module	A functional subgroup of strongly interconnected nodes.
Community membership	Similar to modules. Nodes that are strongly connected to each other are assumed to share some function.
Global efficiency	A measure of how easily two nodes can communicate (average inverse shortest path length).
Clustering coefficient	A measure of local connectivity, i.e. how connected to each other are the neighbors of a given node.
Characteristic path length	A measure of distance between nodes, averaged across the entire network. Commonly used as a metric for integration.

***Note: each of the above terms is described in depth with mathematical formulations in [1].**

Supplementary Table 2: No Significant Differences in Grey/White Matter or CSF Volume in the ^{1}H-MRS Voxel between FM and HC

Right Posterior Insula ^{1}H-MRS Voxel	FM (mean ± SD)	HC (mean ± SD)	Statistics
Grey Matter	0.3390 ± 0.08	0.3259 ± 0.08	t=-0.641, p=0.524
White Matter	0.6196 ± 0.09	0.6334 ± 0.08	t=0.591, p=0.557
CSF	0.0394 ± 0.02	0.0391 ± 0.01	t=-0.065, p=0.948

FM, fibromyalgia; HC, healthy control; SD, standard deviation; ^{1}H-MRS, proton magnetic resonance spectroscopy

Supplementary Table 3: No Significant Differences in Grey/White Matter or CSF Volume of the ^{1}H-MRS Voxel between FM Pain Tertiles

FM, fibromyalgia; SD, standard deviation; ^{1}H-MRS, proton magnetic resonance spectroscopy

Right Posterior Insula ^{1}H-MRS Voxel	High Pain FM (mean ± SD)	Medium Pain FM (mean ± SD)	Low Pain FM (mean ± SD)	Statistics
Grey Matter	0.3259 ± 0.08	0.3605 ± 0.09	0.3441 ± 0.08	F=1.208, p=0.314
White Matter	0.6333 ± 0.10	0.5968 ± 0.10	0.6112 ± 0.08	F=1.188, p=0.321
CSF	0.0391 ± 0.02	0.0401 ± 0.02	0.0429 ± 0.01	F=0.454, p=0.715

Supplementary Table 4: Current Medications in fibromyalgia discovery cohort

Medication	# Fibromyalgia Patients
Antidepressants (SSNRI, SSRI, NDRI, TCA)	9
Benzodiazepines	3
Pregabalin	2
Opioids/Narcotic Analgesics	5
Muscle Relaxants	8
NSAIDs	20
Marijuana	1

*Data not collected in 9 FM participants, table above contains medication usage for remaining n=31 FM patients

Supplementary Table 5: Global Network Measures

Measure	FM (mean ± SD)	HC (mean ± SD)	Statistics
Global Efficiency	0.5740 ± 0.005	0.5733 ± 0.007	t=0.419, p=0.657
Clustering Coefficient	0.4730 ± 0.025	0.4739 ± 0.033	t=0.109, p=0.899
Average Path Length	2.01 ± 0.03	2.02 ± 0.05	t=0.694, p=0.490
Modularity	0.3349 ± 0.027	0.3406 ± 0.033	t=0.750, p=0.439

FM, fibromyalgia; HC, healthy control; SD, standard deviation

Supplementary Table 6: Hubs (Eigenvector Centrality) in Fibromyalgia Discovery Cohort and Healthy Controls

Hubs in Fibromyalgia Patients Brain Region (Node #)	**Eigenvector Centrality**	**Hubs in Healthy Controls Brain Region (Node #)**	**Eigenvector Centrality**
L superior temporal gyrus (58)	0.078	L Supplementary Motor Area (15)	0.069
R mid insula (56)	0.078	L angular (86)	0.068
R superior temporal gyrus (62)	0.076	R mid cingulate (216)	0.068
L Supplementary Motor Area (15)	0.076	R secondary visual cortex (165)	0.067
L mid cingulate (213)	0.075	L inferior parietal lobule (177)	0.067
L Supplementary Motor Area (47)	0.073	L primary somatosensory cortex (65)	0.067
L mid cingulate (59)	0.073	R precuneus (163)	0.067
R inferior parietal lobule (235)	0.072	R precuneus (156)	0.066
R supplementary motor area (54)	0.071	R mid temporal gyrus (119)	0.066
R posterior cingulate (203)	0.071	R primary visual cortex (148)	0.065
L precuneus (166)	0.070	R Primary/Secondary Visual Cortex (170)	0.065

R supramarginal gyrus (204)	0.070	L supplementary motor area (47)	0.065
R mid insula (60)	0.070	R angular gyrus (96)	0.065
L primary motor cortex/operculum (70)	0.069	R cuneus (145)	0.065
L primary somatosensory cortex (65)	0.069	R mid frontal gyrus (196)	0.064
R anterior insula (209)	0.069	L mid temporal gyrus (79)	0.064
R mid frontal gyrus (189)	0.069	L cuneus (167)	0.064
R mid cingulate (216)	0.069	Dorsal anterior cingulate cortex (215)	0.064
L anterior insula (208)	0.068	R supplementary motor area (40)	0.063
R primary motor cortex (29)	0.067	L mid temporal gyrus (84)	0.063
R precuneus (156)	0.067	R superior temporal gyrus (62)	0.063
Dorsal anterior cingulate cortex (215)	0.067	L posterior cingulate cortex (88)	0.063
R superior temporal gyrus (63)	0.067	L mid cingulate cortex (213)	0.063
R precuneus (136)	0.066	R superior frontal gyrus (219)	0.063
L primary somatosensory cortex (69)	0.066	L superior frontal gyrus (99)	0.063
L mid insula/operculum (55)	0.066	R inferior parietal lobule (192)	0.063
L mid cingulate (94)	0.066	Medial prefrontal cortex (105)	0.062
R superior frontal gyrus (218)	0.066	L superior frontal gyrus (112)	0.062
R cuneus (159)	0.065	R mid insula (56)	0.062
R superior parietal lobule (258)	0.065	L cuneus (146)	0.062
R inferior frontal gyrus (186)	0.065	R primary visual cortex (141)	0.062
R superior temporal gyrus (240)	0.064	R mid temporal gyrus (80)	0.062
L superior frontal gyrus (220)	0.063	R mid temporal gyrus (9)	0.062
L mid frontal gyrus (188)	0.063	L primary visual cortex (152)	0.062
R mid frontal gyrus (205)	0.063	L mid temporal gyrus (118)	0.062
R supplementary motor area (53)	0.063	R supramarginal gyrus (204)	0.062
L visual association cortex (155)	0.062	L mid cingulate (94)	0.061
L cuneus (167)	0.062	L inferior parietal lobule (195)	0.061
		R visual association cortex (162)	0.061
		R visual association cortex (153)	0.061
		L secondary/visual association cortex (172)	0.061
		L parahippocampal gyrus (160)	0.061
		R superior frontal gyrus (218)	0.061

Supplementary Table 7: Hubs (Degree) in Fibromyalgia Discovery Cohort and Healthy Controls

Hubs in Fibromyalgia Patients		Hubs in Healthy Controls	
Brain Region (Node #)	**Degree**	**Brain Region (Node #)**	**Degree**
L Inferior Frontal Gyrus (242)	66.8	R Posterior Cingulate (203)	65.3
Dorsal Anterior Cingulate (215)	67.2	Medial Prefrontal Cortex (105)	65.4
R Precuneus (156)	67.6	R Supplementary Motor Area (54)	65.6
L Mid Insula/Operculum (55)	67.8	R Inferior Parietal Lobule (192)	65.8

R Superior Parietal (258)	68.1	L Medial Superior Frontal Gyrus (202)	66.0
L Primary Somatosensory Cortex (69)	68.2	R Precuneus (136)	66.1
R Inferior Temporal Gyrus (179)	68.5	R Visual Association Cortex (162)	66.1
R Superior Temporal Gyrus (240)	68.5	L Mid Frontal Gyrus (214)	66.2
R Mid Frontal Gyrus (189)	68.7	L Mid Cingulate (94)	66.3
R Mid Cingulate (216)	68.8	R Visual Association Cortex (153)	66.4
L Mid Cingulate (94)	68.9	L Mid Temporal Gyrus (84)	66.4
L Precuneus (166)	69.1	L Cuneus (167)	66.5
R Mid Insula (60)	69.5	R Angular Gyrus (96)	66.8
R Inferior Frontal Gyrus (186)	69.5	R Precuneus (163)	67.1
R Superior Temporal Gyrus (63)	69.7	L Mid Cingulate (59)	67.1
R Precuneus (136)	69.7	R Supplementary Motor Area (40)	67.1
L Primary Motor Cortex/Operculum (70)	69.8	R Supramarginal Gyrus (204)	67.2
R Anterior Insula (209)	70.2	R Primary/Secondary Visual Cortex (170)	67.3
L Anterior Insula (208)	70.5	R Mid Temporal Gyrus (119)	67.4
R Primary Motor Cortex (29)	70.5	R Cuneus (145)	67.4
R Supramarginal Gyrus (204)	70.7	Dorsal Anterior Cingulate (215)	67.7
R Supplementary Motor Area (54)	70.8	R Superior Temporal Gyrus (62)	67.7
L Primary Somatosensory Cortex (65)	70.9	L Angular Gyrus (86)	67.7
R Posterior Cingulate (203)	71.4	L Inferior Parietal Lobule (177)	67.7
L Mid Cingulate (59)	71.9	R Precuneus (156)	67.8
L Inferior Parietal Lobule (235)	72.5	R Primary Visual Cortex (148)	68.4
L Mid Cingulate (213)	72.8	R Superior Frontal Gyrus (219)	68.4
L Supplementary Motor Area (47)	74.1	L Superior Temporal Gyrus (58)	69.2
R Superior Temporal Gyrus (62)	75.5	R Mid Insula (56)	69.7
L Supplementary Motor Area (15)	76.4	R Mid Cingulate (216)	70.5
R Mid Insula (56)	77.2	L Supplementary Motor Area (47)	70.7
L Superior Temporal Gyrus (58)	77.6	R Secondary Visual Cortex (165)	71.0
		L Mid Cingulate (213)	71.2
		L Primary Somatosensory Cortex (65)	72.5
		L Supplementary Motor Area (15)	73.4

L, left; R, right

Supplementary Table 8: Differences in hub status (Degree) between FM discovery cohort and HCs

	Brain Region (Node #)	HC (mean ± SD)	FM (mean ± SD)	t	p-value
Degree					
FM > HC	R mid insula (56)	69.68 ± 15.46	77.22 ± 13.83	2.39	0.02
	L STG (58)	69.17 ± 12.23	77.64 ± 14.69	2.88	0.00
	R STG (62)	67.66 ± 15.77	75.53 ± 15.13	2.36	0.02
	L M1/Operculum (70)	61.36 ± 18.57	69.77 ± 17.03	2.19	0.03
	R ITG (179)	57.31 ± 11.51	68.48 ± 14.64	2.39	0.02
	R IFG (186)	62.64 ± 12.20	69.52 ± 14.18	2.04	0.04

	R PCC (203)	65.29 ± 14.69	71.43 ± 13.17	2.15	0.03
	L anterior insula (208)	63.54 ± 14.09	70.46 ± 15.52	3.43	0.00
	R IPL (235)	64.99 ± 13.78	72.48 ± 13.06	3.35	0.00
	R STG (240)	58.31 ± 13.61	68.51 ± 14.50	2.14	0.03
	R superior parietal (258)	61.25 ± 14.80	68.13 ± 14.99	2.61	0.01
HC > FM	R V2 (165)	70.96 ± 12.03	65.05 ± 11.82	-2.10	0.04

Supplementary Table 9: Correlations Between Eigenvector Centrality and Clinical Pain in Fibromyalgia discovery cohort

	Brain Region (Node #)	r-value	p-value
Positive Correlations	L Primary Somatosensory Cortex (20)	0.409	0.010
	R Primary Motor Cortex (21)	0.361	0.024
	L Primary Somatosensory Cortex (23)	0.323	0.045
	L Primary Motor Cortex (24)	0.358	0.025
	L Primary Motor Cortex (27)	0.363	0.023
	L Primary Somatosensory Cortex (30)	0.389	0.014
	R Supplementary Motor Area (31)	0.369	0.021
	R Primary Motor/Somatosensory Cortex (36)	0.468	0.003
	L Primary Motor Cortex (37)	0.383	0.016
	R Posterior Insula (43)	0.429	0.006
	L Primary Motor/Somatosensory Cortex (45)	0.366	0.022
	R Primary Motor/Somatosensory Cortex (46)	0.416	0.008
	R Supramarginal Gyrus (48)	0.398	0.012
	L Primary Motor Cortex/Operculum (55)	0.389	0.014
	R Superior Temporal Gyrus (62)	0.396	0.013
	R Superior Temporal Gyrus (63)	0.455	0.004
	R Posterior Insula (67)	0.344	0.032
	L Primary Motor Cortex/Operculum (70)	0.566	0.000
	R Primary Motor Cortex/Operculum (71)	0.368	0.021
	R Primary Motor/Somatosensory Cortex (72)	0.416	0.008
	R Superior Temporal Gyrus (238)	0.488	0.002
Negative Correlations	L Orbitofrontal Gyrus (78)	-0.347	0.031
	R Angular Gyrus (130)	-0.366	0.022
	L Superior Frontal Gyrus (138)	-0.355	0.027
	L Supplementary Motor Area (174)	-0.327	0.042
	R Mid Frontal Gyrus (196)	-0.387	0.015
	R Supramarginal Gyrus (204)	-0.332	0.039
	R Posterior Cingulate (221)	-0.331	0.039
	R Inferior Frontal Gyrus (241)	-0.387	0.015
	L Inferior Temporal Gyrus (262)	-0.435	0.006

L, left; R, right

Supplementary Table 10: Summary of Validation Results

Analysis: Most salient result	Replication (Y, N, Partial)	Summary of Replication Result
Global Measures: No difference between FM and HC	Y	No significant differences between FM validation and HC
Hub Brain Regions: Bilateral anterior insula, M1, S1 were hubs in FM, but not HCs	N	Hubs were mainly in the DMN. Anterior insula, M1 and S1 were not hubs in the FM validation cohort.
Significant Differences in eigenvector centrality between FM and HCs: See Table 1	N	See supplementary table 11.
Rich Club: No difference in level of rich club organization, but membership is altered. Anterior insula, MCC, ACC members of rich club in FM.	Partial	No difference in rich club organization between FM validation and HCs. Anterior insula is not a member of the rich club, but the MCC and ACC were.
Varying Rich Club Membership with Clinical Pain: As pain increases, rich club nodes primarily in S1, M1, SMA, and insula.	Y	At 5% density, the bilateral mid insula is a member of the rich club in the high pain FM validation group, but not the low pain. At higher densities, the anterior insula, mid insula, S1, M1 and SMA are hubs only in the high pain group.
Correlations between Eigenvector Centrality and Clinical Pain: Positive associations between eigenvector centrality in bilateral S1/M1, STG and posterior insula and clinical pain.	Partial	Eigenvector centrality of the anterior, mid and posterior insula positively correlated with clinical pain.

Supplementary Table 11: Hubs in fibromyalgia validation cohort

Brain region (Node #)	Degree	Brain region (Node #)	Eigenvector Centrality
R medial prefrontal cortex (105)	79.8	R medial prefrontal cortex (105)	0.090
L posterior cingulate (88)	75.3	L posterior cingulate (88)	0.085
L superior frontal gyrus (112)	73.7	R superior frontal gyrus (101)	0.078
R mid cingulate (216)	72.8	L mid temporal gyrus (117)	0.077
Dorsal ACC (215)	72.5	L superior frontal gyrus (112)	0.077
R mid frontal gyrus (196)	72.4	L superior temporal gyrus (236)	0.076
L mid temporal gyrus (118)	72.3	R posterior cingulate (92)	0.076
R inferior temporal gyrus (249)	72.3	L mid temporal gyrus (84)	0.075
R superior frontal gyrus (101)	72.3	R inferior temporal gyrus (249)	0.074
L mid temporal gyrus (117)	72.0	L mid temporal gyrus (118)	0.074
L superior temporal gyrus (236)	71.6	L inferior parietal lobule (177)	0.074

L superior temporal gyrus (66)	71.2	Dorsal ACC (215)	0.073
L mid frontal gyrus (100)	71.2	L dorsal anterior cingulate (113)	0.073
L superior temporal gyrus (58)	70.9	L mid frontal gyrus (100)	0.073
L primary motor cortex (174)	70.6	R precuneus (89)	0.071
L mid temporal gyrus (84)	70.1	R superior frontal gyrus (106)	0.071
R mid temporal gyrus (119)	70.0	L superior frontal gyrus (98)	0.071
R posterior cingulate (92)	69.8	L inferior frontal gyrus (137)	0.070
L superior frontal gyrus (202)	69.6	L primary motor cortex (174)	0.070
L dorsal anterior cingulate (113)	69.5	R mid temporal gyrus (80)	0.070
R inferior frontal gyrus (186)	69.1	R precuneus (163)	0.070
R mid insula (56)	69.0	L parahippocampal gyrus (160)	0.069
L superior frontal gyrus (98)	68.8	R mid insula (56)	0.069
L primary visual cortex (152)	68.7	R inferior frontal gyrus (186)	0.069
R superior temporal gyrus (63)	68.6	R posterior cingulate (221)	0.069
R inferior frontal gyrus (175)	68.5	R mid temporal gyrus (119)	0.069
R mid frontal gyrus (97)	68.4	L superior temporal gyrus (81)	0.069
R secondary visual cortex (165)	68.3	R anterior cingulate cortex (110)	0.068
R precuneus (163)	68.2	R mid frontal gyrus (196)	0.068
L supplementary motor area (15)	68.1	R mid cingulate (216)	0.068
L supplementary motor area (47)	68.0	L superior frontal gyrus (202)	0.067
R superior frontal gyrus (106)	68.0	Posterior cingulate (133)	0.067
R posterior cingulate (221)	68.0	R mid frontal gyrus (97)	0.067
L parahippocampal gyrus (160)	67.9	L inferior frontal gyrus (132)	0.067
L inferior frontal gyrus (132)	67.8	R mid frontal gyrus (189)	0.067
R precuneus (89)	67.6	L superior temporal gyrus (66)	0.067
R mid temporal gyrus (80)	67.5	L superior temporal gyrus (58)	0.067
L inferior parietal lobule (177)	67.3	L angular gyrus (86)	0.067
L inferior frontal gyrus (137)	67.2	R superior temporal gyrus (63)	0.066
L superior temporal gyrus (81)	67.1	L primary visual cortex (152)	0.066
R mid insula (60)	66.8	R superior frontal gyrus (102)	0.066
L cuneus (167)	66.6	L angular gyrus (87)	0.065
L anterior insula (208)	66.5	L supplementary motor area (15)	0.065
		L posterior cingulate (90)	0.065
		R secondary visual cortex (165)	0.064

Supplementary Table 12: Differences in hub status (eigenvector centrality) between FM validation cohort and HCs

	Brain Region (Node #)	HC (mean ± SD)	FM Validation (mean ± SD)	t	p-value
FM > HC	L PCC (88)	0.063 ± 0.032	0.085 ± 0.027	2.37	0.034
	mPFC (105)	0.063 ± 0.029	0.090 ± 0.034	2.51	0.026

HC > FM	R precuneus (136)	0.058 ± 0.025	0.041 ± 0.020	-2.32	0.036
	R precuneus (156)	0.066 ± 0.027	0.048 ± 0.016	-2.68	0.019
	R PCC (203)	0.059 ± 0.028	0.044 ± 0.012	-2.55	0.024
	R anterior insula (209)	0.053 ± 0.027	0.035 ± 0.011	-3.31	0.006

References

[1] Fornito A, Zalesky A, Bullmore E. Fundamentals of Brain Network Analysis - Alex Fornito, Andrew Zalesky, Edward Bullmore - Google Books, 2016.