Supplemental Materials for:

Effects of a Motor-Imagery Task on Functional Brain Network Community Structure in Older Adults: Data from the Brain Networks and Mobility Function (B-NET) Study

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Supplemental Methods:

1. The Mobility Assessment Tool – short form (MAT-sf)

The Mobility Assessment Tool – short form (MAT-sf) is a brief measure of older adults' self-perceptions of their ability to perform basic mobility-related tasks such as walking at different speeds and climbing stairs under different constraints. It takes less than 5 minutes to complete and uses 10 video clips of an avatar to depict these tasks that vary in difficulty [1]. The 10 items include: walking on even ground (1), slowly jogging (2), scaling a ramp with (3) and without (4) a handrail, stepping over hurdles (5), walking uphill outdoors on uneven ground (6), going up and down a set of stairs both using (7) and avoiding (8) the use of a handrail, and climbing stairs with one (9) or two (10) bags. Following the viewing of each item, participants are asked about their ability to complete the tasks. For items 1-2, participants are asked the duration for which they could complete the task in minutes between 0 and 60. Questions for items 3 and 4 inquire about the number of times they could complete the task ranging from 0 to 4. The questions following items 5-10 simply ask if participants could complete the task (e.g. yes or no). The 10 items were selected based on individual response and information curves derived from item response theory [1-3]. Information on specific difficulty ratings for each video can be found in the original publication [1].

2. Brain Network Analysis: Study-specific ROIs

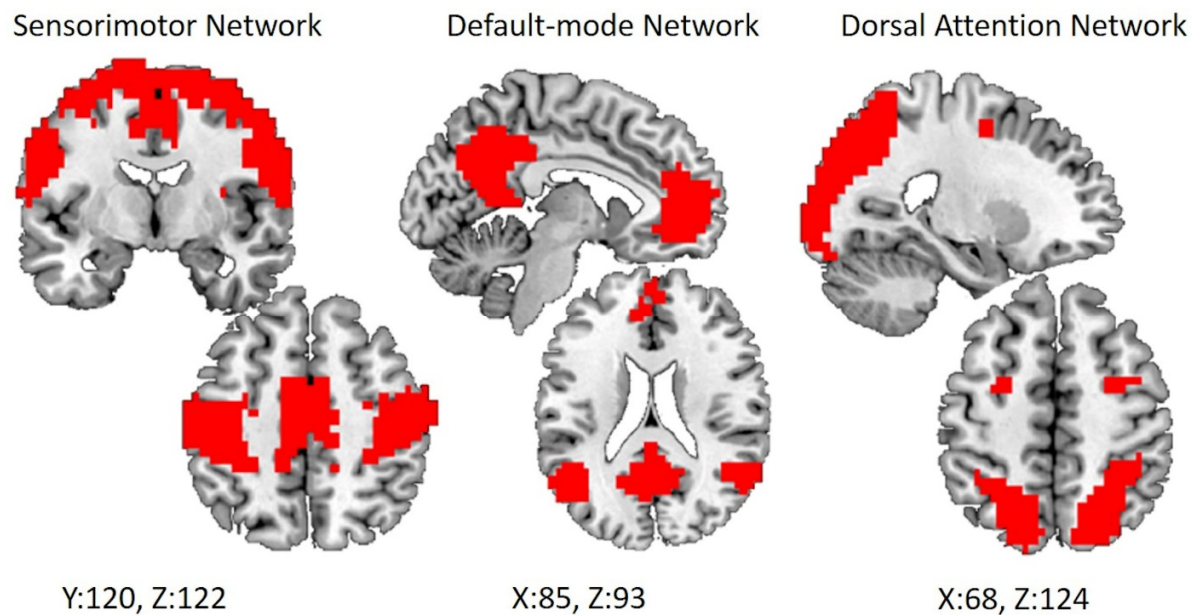| Sensorimotor Network	Default-mode Network	Dorsal Attention Network
Y:120, Z:122	X:85, Z:93	X:68, Z:124

Figure S1: Study-specific regions of interest (ROI) generated for the three intrinsic networks of interest in the regional analyses.

References

1.   Rejeski, W. J.; Ip, E. H.; Marsh, A. P.; Barnard, R. T., Development and validation of a video-animated tool for assessing mobility. *The journals of gerontology. Series A, Biological sciences and medical sciences* **2010,** *65* (6), 664-671.

2.   Marsh, A. P.; Ip, E. H.; Barnard, R. T.; Wong, Y.-L.; Rejeski, W. J., Using video animation to assess mobility in older adults. *The journals of gerontology. Series A, Biological sciences and medical sciences* **2011,** *66* (2), 217-227.

3.   Rejeski, W. J.; Rushing, J.; Guralnik, J. M.; Ip, E. H.; King, A. C.; Manini, T. M.; Marsh, A. P.; McDermott, M. M.; Fielding, R. A.; Newman, A. B.; Tudor-Locke, C.; Gill, T. M.; Group, L. S., The MAT-sf: identifying risk for major mobility disability. *The journals of gerontology. Series A, Biological sciences and medical sciences* **2015,** *70* (5), 641-646.