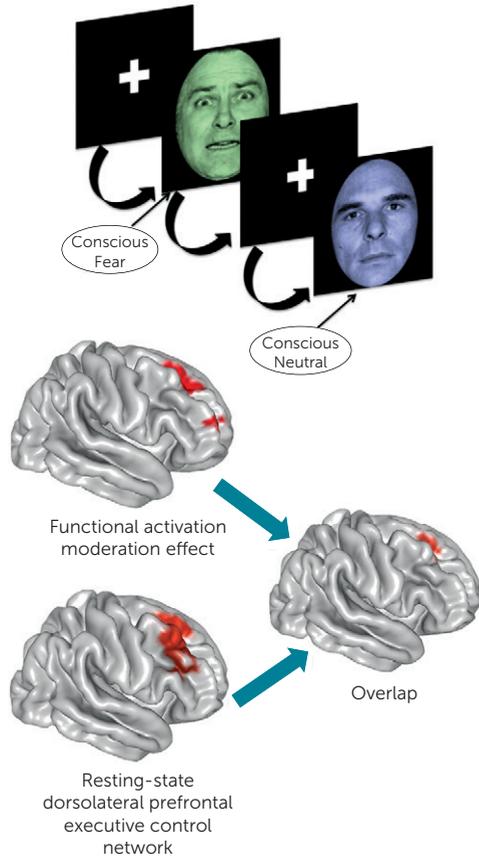


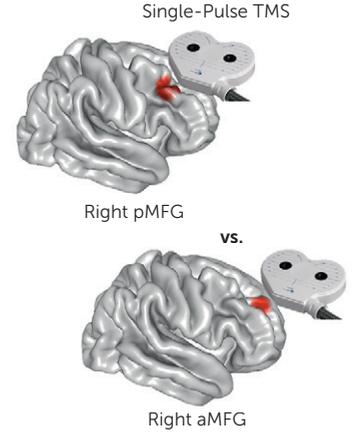
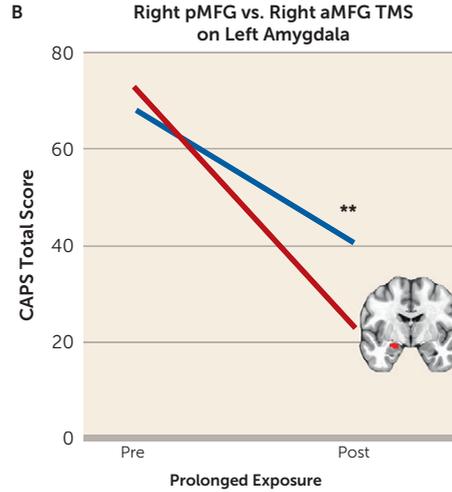
FIGURE 4. Prediction of Treatment Response to Prolonged Exposure by Degree of Inhibition of Left Amygdala Activation From Transcranial Magnetic Stimulation (TMS) Single Pulses Delivered to the Right Dorsolateral Prefrontal Cortex^a

Concurrent TMS-fMRI (Immediate Treatment only)
Right pMFG (Executive Control Network) vs. Right aMFG (Salience)

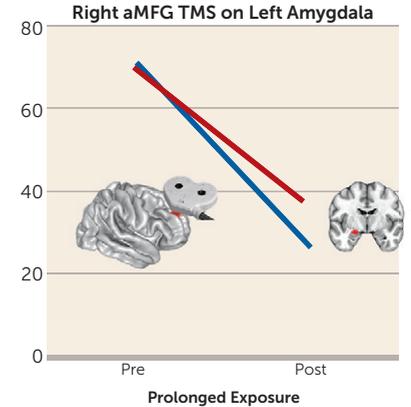
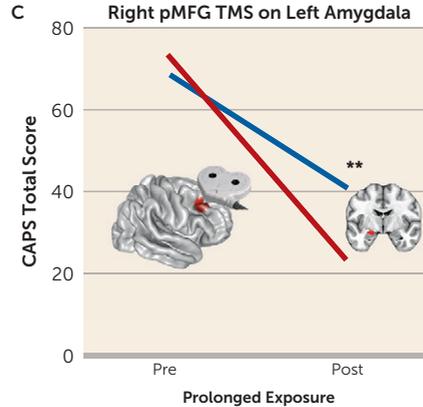
A



B



C



— Participants with moderator above median value
— Participants with moderator below median value

^a The right dorsolateral prefrontal region observed to moderate treatment response during emotional reactivity largely overlapped with the right prefrontal node (posterior middle frontal gyrus) of the canonical resting-state executive control network (panel A). A random subset of individuals (N=17) in the immediate prolonged exposure treatment group underwent concurrent single-pulse TMS to this executive control network node as well as to another right prefrontal node (the anterior middle frontal gyrus) of the canonical resting-state salience network. The area of the left amygdala in which less activation during emotional reactivity was found to moderate treatment response (see Figure 2) was also modulated by single-pulse TMS to the right posterior middle frontal gyrus (versus right anterior middle frontal gyrus stimulation). Specifically, individuals displaying greater inhibition of the left amygdala in response to single TMS pulses to the right posterior middle frontal gyrus (versus right anterior middle frontal gyrus stimulation) displayed better treatment outcomes (panel B). This effect arose entirely from right posterior middle frontal stimulation and not right anterior middle frontal gyrus stimulation (panel C). The red areas representing the TMS targets in panel B are 8-mm spheres centered on the cluster centers of mass for the right executive control and right salience network prefrontal nodes independently derived from a separate healthy control data set. Separate lines represent individuals above and below the median level of left amygdala activation for the purposes of visualizing disparate symptom change trajectories within the immediate treatment group. aMFG=anterior middle frontal gyrus; CAPS=Clinician-Administered PTSD Scale for DSM-IV; pMFG=posterior middle frontal gyrus; TMS=transcranial magnetic stimulation.

**p<0.01.