Study	Task during scanning	Training time	Regions showing decreased activity	Regions showing increased acitivity
fMRI studies				
Hempel *et al.* (2004)	Visuospatial n-back	4 weeks, 2x-/day (total NA)	R MFG, R IFG, SPC, IPC (inital increase later decrease)	R MFG, R IFG, SPC, IPC (inital increase later decrease)
Olesen *et al.* (2004) – Exp. 1	Visuospatial WM task	5 weeks, 18 sessions (total NA)	Cingulate sulcus, inferior frontal sulcus, postcentral gyrus	R MFG, superior and intraparietal cortex
Olesen *et al.* (2004) – Exp. 2	Visuospatial WM task	5 weeks, 18 sessions (total NA)	Cingulate sulcus, inferior frontal sulcus, PCG	L MFG, SPC, intraparietal cortex, IPC, pulvinar thalamic nucleus, caudate nucleus (head)
Westerberg and Klingberg (2007)	Visual WM task	5 weeks, 24.9 sessions (total NA)	-	MFG left and right, parietal lobe (superior, intra and inferior)
Dahlin *et al.* (2008) - Exp. 1	Visual updating task, visual n-back	5 weeks 3x-/week (11.3 h total)	R frontal lobe, R parietal lobe	L frontal lobe, L parietal lobe, bilateral temporal lobe, cerebellum, bilateral striatum, occipital lobe and brain stem.
Dahlin *et al.* (2008) - Exp. 2	Visual updating task, visual n-back, visual Stroop	5 weeks, 3x-/week (11.3 h total)	-	L striatum, R temporal lobe, occipital lobe, L frontal lobe, bilateral parietal lobe, L cerebellum
Jolles *et al.* (2010) – Exp. 1	Verbal WM maintenance	6 weeks, 2.7x-/week (6.9 h total)	-	VLPFC, paracingulate, lingual gyrus
Jolles *et al.* (2010) – Exp. 2	Verbal WM manipulation	6 weeks	-	L VLPFC, L DLPFC, left SPC, R striatum, temporal pole
Jolles *et al.* (2012)	Object span task (forwards and backwords)	6 weeks, 2-3x-/week (total NA)	-	R DLPFC
Schneiders *et al.* (2011) – Exp. 1	Visual n-back	10 sessions (8 h total)	R MFG, R intraparietal sulcus	-
Schneiders *et al.* (2011) – Exp. 2	Auditory n-back	10 sessions (8 h total)	R MFG, R intraparietal sulcus	-
Schneiders *et al.* (2012) – Exp. 1	Visual n-back	2 weeks, 8 sessions, 50 per session	R IPL, R MFG, PCG	-

Schneiders *et al.* (2012) – Exp. 2	Auditory n-back	2 weeks, 8 sessions, 50 per session	R IFG, R IPL, R MFG	-
Kuhn *et al.* (2013)	Numerical updating task	50 days, 27 h 39 min	Right striatum (putamen), R IFG (later decrease)	Bilateral striatum (putamen) (inital increase later decrease)
Schweizer *et al.* (2013)	n-back emotional	20-30 min/day 16 days	VLPFC, DLPFC and cingulate, Inferior parietal and temporal lobe. (decrease at low load)	R OFC, R Lateral PFC, R IPC
Jolles *et al.* (2013)	resting state	6 weeks, (16 sessions total)	-	Increased connectivity between MFG and SFG, cingulate, parietal lobe
ASL studies				
Takeuchi *et al.* (2013)	Rest	4 weeks, 20-60 min/day	Decreased connectivity from medial PFC and parietal lobe	Global increase in connectivity
Buschkuehl (2014) – Exp.1	Visuo-spatial n-back	7 days, 20 min/day	-	SFG, occipital cortex, PCG
Buschkuehl (2014) – Exp. 2	Rest	7 days, 20 min/day	-	SFG, inferior parietal, PCG

ASL, arterial spin labelling; DL, dorsolateral; DLPFC, dorsolateral prefrontal cortex; F, frontal; fMRI, functional magnetic resonance imaging; I, inferior; IFC, inferior frontal cortex; IFG, inferior frontal gyrus; IOG, inferior occipital gyrus; IPC, inferior parietal cortex; IPL, inferior parietal lobule; IT gyrus, inferior temporal gyrus; L, left; LO cortex, lateral occipital cortex; LPFC, lateral prefrontal cortex; M, middle; MFG, middle frontal gyrus; mPFC, middle prefrontal cortex; MT gyrus, middle temporal gyrus; OFC, orbitofrontal cortex; P, parietal; P, posterior; PCG, postcentral gyrus; PFC, prefrontal cortex; PHC/putamen, parahippocampal cortex/putamen; R, right; S, superior; SFG, superior frontal gyrus; SMA, supplementary motor area; SPC, superior parietal cortex; VL, ventrolateral; VLPFC, ventrolateral prefrontal cortex.

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