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Ad le ce - pecific pa e f beha i a d e al ac i i d i g cial ei f ce e lea i g

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J a ha D ke · B. J. Ca e

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s e e e , I e. 2014

Ab ac H a s a s s e a s e a s. e a e f s a e a s a , a e a a - se e. s a a se s a a f a a s e a s a s e a s s s - s s f s e a s s s . s s 120 a e a s a f 8 a 25 a s a s e a f e a a s a f s s e a f ae a s a a - ea a a . - f a e a s e - as fM I sea . M a - - a , e a a s s a a a se s, s s a a se s - s a ss ff a ae s f s s f ae . F ea s a s s e a f e e a a ae a f a e a a s a ae ss a . A se s, e a a s, s a s a ae s e a a e as ae s a e a f - ae a ss f e e , s s a a a a a a a se s a ae . f- f a s f s s e a f e a e a e a a s, a s s e a f e- a a a se s. , s f s ea a s s a a a se e s s f e ae s a s - s ss a a s f s a a a - se a .

Ke d A se e fM I · f e · e a ae a e · s · B a

I d c i

H s a e ae a e a se e a ass - e a s f- s , a s se , a a s f (, Ca , & C , 2005; a a s , L e , e , E s, & G ss s, 2013; z & Ca , 1997). I e as, a se s ass e a se a a , a ss ,

Elec ic le e a a e ial f s a e (:10.3758/s13415-014-0257z) e a s s a a a, e s a a a a z s s.

. M. J s (✉) · E. J. · A. s · N. M a · B. J. Cas
ae I s f D a s e ,
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L. H.
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a a (D a., 2003; La, J a, D, & Ba, 2001; & A s, 2004; a, a, B, D s, & a, 2010; & K s, 2011).

(Ba & M s, 2013; 2013; 2008). Ha (C, Ba, B a, & L, 2000), a (C, A, 'B, e, & , 2011; Ga & , 2005; a, C, A, & , 2014). I (La G a, s, & F, 2001).

I as (B a & D a, 2013; Fa, Nz ez, L, & D a, 2012; a, a, & a a, 2008; L, A s, & a, 2012; M, M a ez, & H, 2013; a a., 2010; a B s, MeC, Ha s, F s, & C, 2007). (J a., 2011)

(Ca a a., 2010; C a., 2010; Ga a a., 2006; G, e, a a, & L a, 2010; a L s a., 2010), (C a., 2010).

s a, as e a e a s. A a, C a e (a B s, C, Ka, & C, 2012) (a B s a., 2012). A (e a., 2014), a (G a., 2012; G, MeC, & N s, 2009; Mas a., 2009; 2013) as

8- 25- a (J a., 2011), M I. (a & a, 1972),

Me h d

a e a s

8–25 a s f a N -f a s M I s e a = 120 a s f a = 78 f M I a a s s (a 1). A a e a s a s f e a s e a e s as a s f- C ea I D M–I a s I D s K A C D s z a f e Affe D s a L f s . Es a I as as [illegible] 1999) [illegible] 1. [illegible] 95 [illegible] 60 % [illegible] 1.

[illegible] 2 [illegible] (F [illegible] 1a): (1)

E [illegible]

[illegible] (2011). [illegible] 1 ([illegible]) 10 ([illegible]) [illegible]

[illegible] (2, 4, 6, 8 s) [illegible] 2 s [illegible] (2, 4, 6, 8 s) [illegible] 18 [illegible] 6 [illegible] 108 [illegible] 36 [illegible] “I [illegible]” [illegible] Ca [illegible] a?’; “I a s [illegible]”).

[illegible] (18 [illegible] s) [illegible] 100 % [illegible] 33 % [illegible] (66 %) [illegible]

[illegible] E- [illegible] I [illegible] F [illegible] I [illegible] A [illegible] (IFI [illegible] A) [illegible] I). E- [illegible] IFI [illegible] F [illegible] B [illegible] s, I e., [illegible] A).

A [illegible]

M a , I) a a a a e . A ,
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a a ea sea as ae (256 256 - a ,
F = 240 ; -f 1.5- sa a
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& as , 2004) (= 2,000 s,
= 30 s, f a = 90). - 5- - e
e s e a s e ae , f 129 s
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64 a , F = 200) e a f
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Da a a a s s

A

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f M I sa = 16.69 a s), a a a a e f e
as ea e a s a a -e a a a -
a . D as s a ss
e s a e s
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a ., 2009

$+ \alpha\delta$ f a . ae as s s ea f e - e a s e e ss a as ass e a e as e f e (Ba & O'D , 2007; a., 2004). s a a se a– a a s s a a a s f s s e a f ae (α^+) a s s e a f ae (α^-) (C & a M , 2013; Ka a., 2009):

$$\begin{cases} {}_{+1} = {} + \alpha^+\delta, & \delta \geq 0 \\ {}_{+1} = {} + \alpha^-\delta, & \delta < 0 \end{cases}$$

s a a s a a a s f s ff ae , s e s f e s - s a s a ff e a f s a a f ae (C s a a., 2013; a B s a., 2012). a a α as a ae a s a a s s a f a as s s e a f e , a a e s as s s. se a– a as f ae a e a 's a- - a - se a sf a e ae ( ) s a a - s a a s -f a a s (α^+, α^- a a) f ae a e a .

a s a s (C s a a., 2013; a B s a., 2012), ff e a f f s s e a f e a f s s e a f e s a a . a ff e , a α^+ a α^- as a a s s a a ss a a s s a a / a a e a a as f- ea e f a a e s a a s. as a as a ss s as a s f ea ff f a a e s e a e a s as a f s f ae , s f ea a ff s α f a s e e a- s ff e se s ae s f - a s s a e s (a a e s). B f -a s e ea $\alpha = 0.025$ e f s s s a e s.

F e a a s s e e e a a f s s s - a a sf a . G a sa , a a s z f e f a e a fM I s a . F e a s f a f e ss f ass e a a 1.56 (a f a) a

a , a . a e a s a a a a f a as s f se e a. a s a a s a a as a a 4.99 a e f a a s s. a a s e , s 1.57 a 4.99 e s f f s - a a (GLM) a a s (a = 3.42 , s a a a = 1.04 ; f e s s f ae a as ss a 5 %). a 1 f a es f a sa .

A a ea a f e a a a s s s a a e s . B s s f a a a a ae a (a a ae & , 1988) e a ae a a a a s a f a s- f a f ae s e 's - a a ea sea s a 12- a a aff a sf a a a - (N27). a a ae - a sf f e a a s a s e 6- Ga ss a a a sa a f3 3 3 .

A GLM a a s s as f a a s s as a f e f f e a . I a a e a a (α^+, α^-), e (δ), a e a a a s f f e a s e as a a e ss s s s a -s e GLMs. Eae a e a 's GLM e a f as ss s: (1) e s , ff as s a e fae s ; (2) a a a e ss a e s e a a a s f ae a ( ); (3) f ae s , e a - a se s s a e f ae as ; (4) a a e ss a f ae s s e a (δ); a (5) e e a s . as ss s e - a a a- a a a e s f e- . ss s f e a a s a a a a e s f ae aee f e a f a a ff s. I s a s e s f a e s, a s e s f f s - a a a a s f as se a , f ae as - a s as s f s f e s: s e (δ^+) a a e (δ^-).

F GLM a f ae a e a , - a a ff s s a s ea a s f e a e a a s a a s a f a a- e ss e a (δ) a a e ( ). f a ff s ae ss a a e a s, s a a -s e s - s -s a - s s f f s a

δ^{+} ... δ^{-} ... α^{+} ... α^{-} ... δ^{+} ... δ^{-}.

M ... GLM ... (A ... & C ..., 1990; ... ., 2004). I ... (B ... -a ... $\alpha = 0.008$).

... $< .05$, ... 3 C ... AFNI ($<$ .005/49 ...). F ... F . 3, ... ($= -7$, $= 8$, $= 2$).

A ... 6- (29- ...) ... (N).

N ... GLMs ... (J ..., 2005; ... ., 2013). ... (F . 4), ... (F . 5), ... (F . 5e), ... (F . 5) ... N .

Re l

B a aa

A ... (2, 228) = 5.64, $< .01$. ... (116) = 3.45, $< .01$, ... (116) = 1.971, $=$ .051, ... (66 %) ... (33 %) ... ($> .24$). ... ($s > .38$). A ...

s fea e a f f af as (a f a ae ss, > .58). as a s fea ae a a a a f f e e a ae ss a s, $(2,220) = 3.18$, $< .05$. s e e a s s fea (s > .13).

A

Aee ae f as f a a e a s (= 94 %, *D* = 4.9 %), a as as , aee ae e as a , a a f a a , $(1, 117) = 11.66$, $< .01$. a ss f a , as aee ae as a a f s s e a f e a a e a s , $(2, 234) = 19.45$, $< .01$. s e a a s s s a a e a s ss aee a s s (= 91.17 %, *D* = 6.16 %), as e a (= 94.03 %, *D* = 6.80 %), $(119) = 4.87$, $< .01$, a (= 94.61 %, *D* = 5.38 %), $(119) = 6.38$, $< .01$. aee ae a (> .36). s fea ae s aee ae a a (s > .78).

A a s s a e s s f a f (β) s a a a a e a a s (> .42), e f a a- a a s e e a ae ss a L a ss s f a s a a a s fea f a a e α^+ ($\beta = 0.22$, $< .02$), a s s a s a a e a a s. s a s s a a s fea f f a a e α^+ ($\beta = -0.26$, $< .01$), e a s a e α^+. I s a a s a a z s a ae f s, a s $\alpha^+ = 0$, e ea a - a s a e a ae a s f s e s a f ae . 20 a s a a z s a a; a a a a s e f a a a f a s a e s (F . 2 ; s a F . 1a f f a s). 20 a s f a a s s, a a e a f α^+ a s fea ($\beta = 0.21$, $< .04$) (F . 2a), as a f α^+ ($\beta = -0.27$, $< .01$). as f s α^+ (= .42). N a f e a a e a a a α^- (s > .09; s a F . 1 f a s f a s a $\alpha^- = 0$). G a s α^+ s a a e s a a e e e a- a a s s s a a a a s a

s a e e a s a a e s s s a a s. a e- a s a α^+ a s s a a s ae s , s f e s a e , $(117) = .23$, $< .02$. s a s fea af a s a a $\alpha^+ = 0$, $(97) = .22$, $< .03$ (F . 2e). s s e a s s s a a - a e a f e e e s, as ea a a e a a e - e s s . a s α^+ a s a ae s f as s fea af e a s e (= .04; B f - a s $\alpha = .025$).

I a

C

e s a s (δ) ss ae f a s s a s s e a BOLD ae - a a f a f a e (FC) s a (s F . 3). a e s a e s ea FC (= −1, = 47, z = 8) a a e s a s a (= −7, = 8, = 2) (a s > .46). A a , a a a s s s a a a a e a a a s f a ae a . A - a s a s s a a e a s

15.6999998(a342.3999939(a 0( )18.89999961( )0( )20( ))a)18

(= −19, = −40, = 68; 92 [illegible]s), [illegible] (= −7, = 20, = 8; 60 [illegible]s), [illegible] (= −22, = 5, = −22; 52 [illegible]s), [illegible] s (s > .36). [illegible]

A [illegible]

M [illegible] GLMs [illegible] ([illegible] 3; F . 5). A [illegible]

[illegible] N [illegible] s. G [illegible] , (76) = .27, < .02, B [illegible] -a [illegible] $\alpha = .025$ (F . 5e), [illegible] (

Table 2 [illegible] (δ) [illegible]

[illegible]	# [illegible]					Age Effects
[illegible]						
[illegible]	1,724	5.29	−1	47	2	n.s.
[illegible]*	150	4.71	−7	8	2	n.s.
L [illegible]	73	4.09	−55	−31	5	n.s.
L [illegible]	61	3.03	−4	−52	20	n.s.
[illegible]	49	3.03	20	-6	27	n.s.
N[illegible]						
[illegible]	1,235	−5.95	10	−58	2	n.s.
[illegible]	203	−3.75	59	−28	35	n.s.
N[illegible]						
L [illegible]	490	−3.58	−13	−19	68	n.s.
[illegible]	258	−3.77	56	−25	44	[illegible]**
[illegible]	95	−3.53	2	−10	50	n.s.
[illegible]	53	−3.42	26	−19	62	n.s.
[illegible]	50	−3.32	−4	−19	44	n.s.

* [illegible]

** A [illegible] (r = .27, p < .02) [illegible]

[illegible] (ps > .23) [illegible] (ps > .37). [illegible]

[illegible]

Discussion

[illegible] (2008) [illegible] (C[illegible] et al., 2013; [illegible] B[illegible] et al., 2012) [illegible]

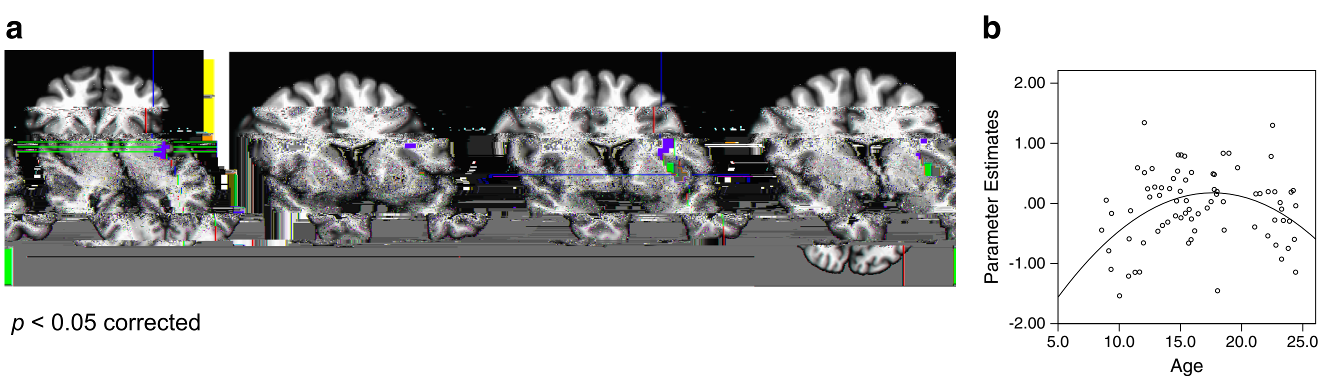
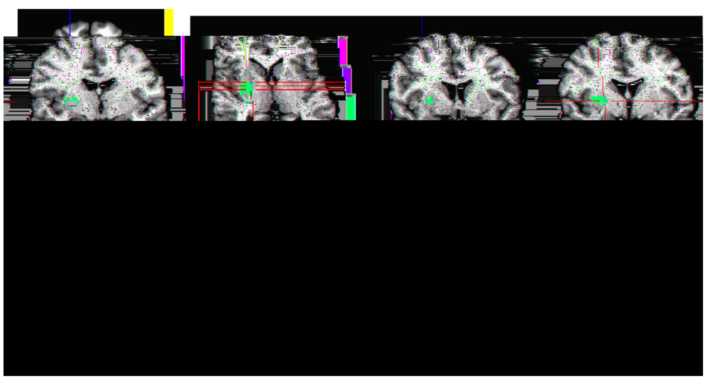


Fig. 4 **a** [illegible] (δ^{+}). [illegible] **b** [illegible]

Table 3 [illegible]

[illegible]	[illegible]	[illegible]			
L[illegible]	100	2.90	−7	−49	56
[illegible]	60	3.18	23	−4	5
B[illegible]	51	3.76	2	−46	−7
[illegible]	49	3.09	15	−34	53

[illegible]



p [illegible]

(Ga[illegible] & [illegible], 2005; [illegible] a., 2014). A [illegible] [illegible] (K[illegible]s, [illegible]z[illegible], H[illegible]z-Da[illegible], & K[illegible]a, 2009)—[illegible]—[illegible] (C[illegible]sa [illegible] a., 2013; C[illegible] a., 2010; [illegible] B[illegible]s[illegible] a., 2012).

I[illegible] (G[illegible] a., 2012; G[illegible] a., 2009; Mas[illegible], [illegible]z[illegible], F[illegible], L[illegible]a, & E[illegible]s[illegible], 2012), a[illegible] (C[illegible]a, 2009; C[illegible]e[illegible], [illegible]s, [illegible]s[illegible], [illegible]a, & D[illegible]a, 2004; Da[illegible]as[illegible], 2003), [illegible] (E[illegible]s[illegible], L[illegible]a, & [illegible]a[illegible]s, 2003; La[illegible], Ba[illegible]s, & D[illegible], 2007), a[illegible] (La[illegible] & [illegible], 2010). I[illegible] (D[illegible]a, C[illegible]a[illegible], M[illegible]s, & Da[illegible]s, 2001) a[illegible] (C[illegible]e[illegible], & [illegible]se[illegible], 2009). [illegible]

I[illegible]a[illegible] -s[illegible] [illegible]. N[illegible] (A[illegible]a[illegible] & C[illegible]e[illegible], 1990; C[illegible], [illegible]se[illegible], D[illegible], & M[illegible]s[illegible], 2002; [illegible] a., 2004), [illegible]. A[illegible]

[illegible]. G[illegible]. I[illegible] (C[illegible]e, [illegible], & [illegible] a[illegible]a, 2010). I[illegible]. F[illegible]

[illegible] (a[illegible] B[illegible]s[illegible] a., 2012) a[illegible] 99.5([illegible]) a a a a a (C & Da , 2012; , 2013).

I e e s , s a a -s e f e f s s e a f ae f s a a ae a a s. D a s f s f e a e a a s, as a s a a s f ae , f as f e . A s' s s a a as a ea s f s a s f - e a s a a a e s (C a ., 2000; L a & D'A a z , 1999; z & Ca , 1997), as as s a s a a a e s s e as s f- , a a , a e a - s (B s & I z , 1995; La a ., 2001). a , a s' s s s s e a s as a f f s a a s a s a ee s e f s.

Ack ledg e a Ga f ass s a e a a e - . ae s e s a s a a C B - ea I a C a B ea I a C a C Me ea C a 32 DA0072774 (.M.J.), 01 DA018879 (B.J.C.), a M D. ae , MD fa .

Refe e ce

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E78)s [illegible] s