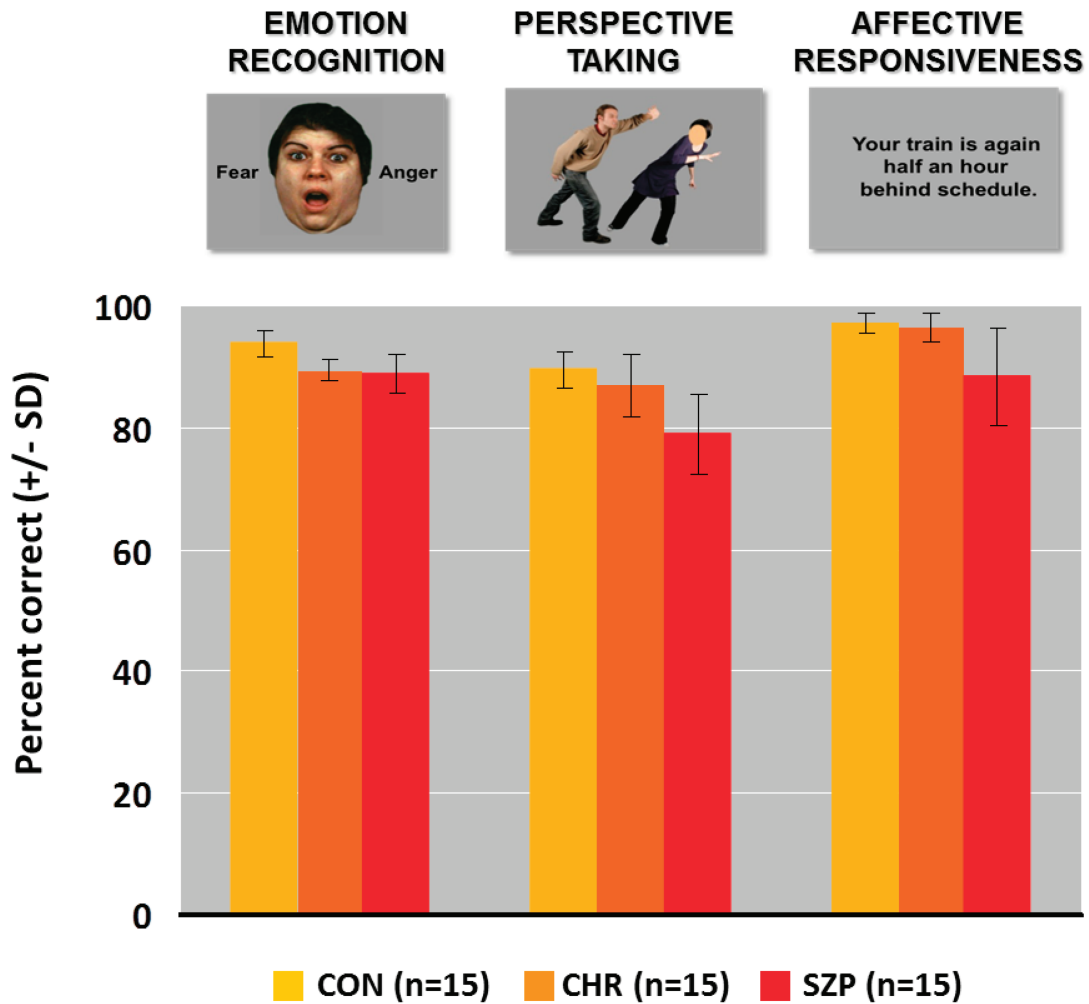
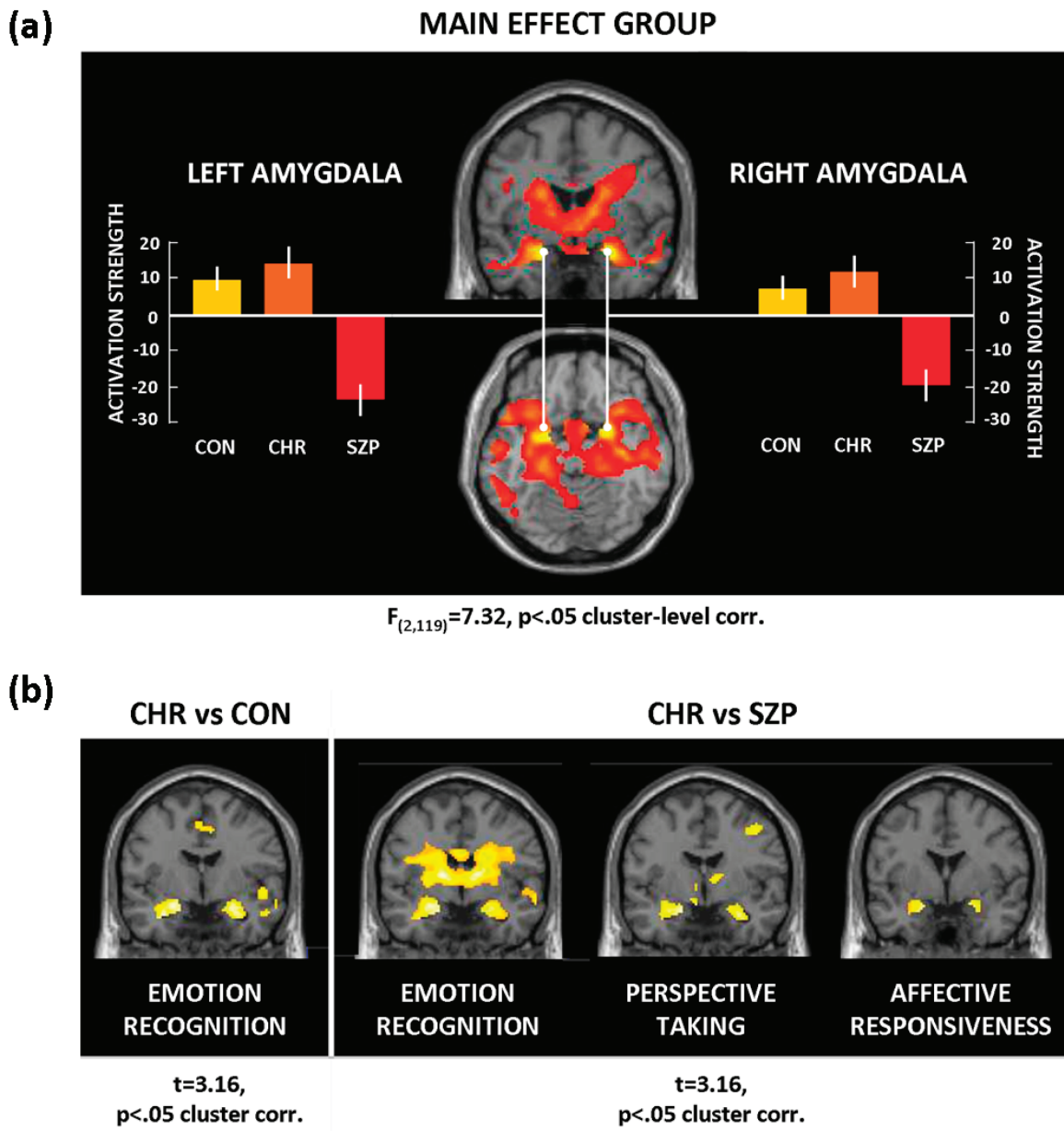


## Data supplement

Derntl et al. Empathy in individuals clinically at risk for psychosis: brain and behaviour. *Br J Psychiatry* doi: 10.1192/bjp.bp.114.159004



**Fig. DS1:** Performance (% correct with s.d. (a) and reaction times (b) in emotion recognition (ER), emotional perspective taking (EPT), and affective responsiveness (AR) in healthy controls, individuals at clinical high risk and persons with schizophrenia.



**Fig. DS2:** (a) Illustration of the significant group effect ( $F=5.69, P<0.05$  cluster-level corr.), depicting hyperactivation of CHR vs. CON and SZP in the amygdala bilaterally. (b) Results for post-hoc comparisons for the separate tasks demonstrating significantly stronger amygdala activation in CHR compared to CON for emotion recognition (left). Additionally, CHR showed significantly stronger amygdala responses in all three paradigms compared to SZP.

**Table DS1:** Results from the post-hoc analysis of the significant group-by-task interaction. For each task MNI coordinates, cluster size, t-value, laterality and region are given (threshold:  $t=3.16$ ,  $p<.05$  cluster level corr.)

Contrast	MNI Coordinates			Cluster size	t-value	L/R	Region
	X	Y	Z				
<b>Emotion recognition – CHR &gt; CON</b>							
	-22	-4	-16	1306	5.42	L	Amygdala
	24	-6	-20	1705	4.87	R	
	18	-60	20	469	5.09	R	Posterior cingulate gyrus
	-8	-20	6	191	4.60	L	Thalamus
	-26	-32	-18	1467	4.48	L	Parahippocampal gyrus
	40	30	24	194	4.28	R	Inferior frontal gyrus
	-8	-56	50	123	4.17	L	Precuneus
	-20	32	40	106	3.93	L	Superior frontal gyrus
	10	2	16	110	3.56	R	Caudate
	-16	-2	10	79	3.52	L	
	6	-2	46	69	3.48	R	Middle cingulate cortex
<b>Emotion recognition – CHR &gt; SZP</b>							
	-14	-8	10	11473	6.10	L	Thalamus
	-22	-2	-18	1927	5.48	L	Amygdala
	38	-60	20	194	4.99	R	Middle temporal gyrus
	8	-72	-18	289	4.84	R	Cerebellum Declive
	-52	-54	-20	117	4.60	L	Inferior temporal gyrus
	-40	-32	64	147	4.53	L	Postcentral gyrus
	-40	-72	22	251	4.48	L	Middle occipital gyrus
	46	46	22	314	4.39	R	Middle frontal gyrus
	26	-70	8	93	4.05	R	Posterior cingulate gyrus
	-44	-60	52	75	4.01	L	Temporo-parietal junction
	62	-4	-10	87	3.92	R	Superior temporal gyrus
	22	42	4	188	3.90	R	Inferior frontal gyrus
	-36	36	4	62	3.64	L	
	-4	-58	52	221	3.71	L	Precuneus
<b>Emotion recognition – CON &gt; CHR</b>							
-							
<b>Emotion recognition – SZP &gt; CHR</b>							
-							
<b>Emotional perspective taking – CHR &gt; CON</b>							
	36	10	28	166	4.48	R	Inferior frontal gyrus
	-2	64	24	82	4.10	L	Superior medial frontal gyrus
	36	-62	20	152	4.01	R	Middle temporal gyrus
	-16	-38	-10	66	3.70	L	Parahippocampal gyrus
	-52	-74	-2	68	3.58	L	Inferior temporal gyrus
<b>Emotional perspective taking – CHR &gt; SZP</b>							

-2	64	24	1033	5.23	L	Superior medial frontal gyrus
18	-92	0	135	4.83	R	Lingual gyrus
28	0	-18	1706	4.83	R	Amygdala
-18	-4	-20	592	4.80	L	
-42	-70	-6	288	4.68	L	Inferior occipital gyrus
38	-64	18	296	4.64	R	Middle temporal gyrus
-46	-80	16	225	4.08	L	
2	-46	26	177	4.47	R	Posterior cingulate gyrus
-2	-94	-6	55	4.45	L	Cuneus
30	42	-4	187	4.41	R	Middle frontal gyrus
-38	38	-2	127	4.20	L	
-20	18	18	299	4.39	L	Putamen
20	-32	-10	111	4.39	R	Parahippocampal gyrus
-18	-34	-8	93	3.42	L	
-8	-48	-18	168	4.21	L	Cerebellum
56	28	2	96	4.08	R	Inferior frontal gyrus

**Emotional perspective taking – CON > CHR**

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**Emotional perspective taking – SZP > CHR**

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**Affective Responsiveness – CHR > CON**

-58	-10	-14	80	4.16	L	Middle temporal gyrus
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**Affective Responsiveness – CHR > SZP**

-18	-4	-20	393	5.64	L	Amygdala
24	0	-18	256	4.56	R	
14	42	56	77	4.74	R	Superior medial frontal gyrus
-18	38	54	344	4.49	L	
-60	-10	-14	65	4.23	L	Middle temporal gyrus
-14	-8	14	312	4.10	L	Thalamus
34	20	-16	60	3.91	R	Inferior frontal gyrus
-50	16	-14	60	3.75	L	Temporal pole

**Affective Responsiveness – CON > CHR**

-64	-46	20	78	3.93	L	Superior temporal gyrus
50	-36	30	66	3.68	R	Temporo-parietal junction

**Affective Responsiveness – SZP > CHR**

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