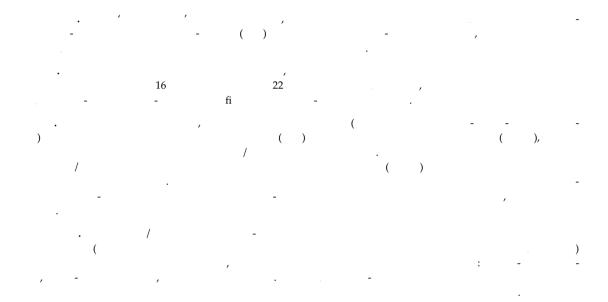
#### . ''t, . t, . t, . , . , . , . . . ''\*

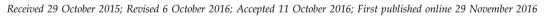
<sup>1</sup> School of Psychological and Cognitive Sciences, and Beijing Key Laboratory of Behavior and Mental Health, Key Laboratory on Machine Perception (Ministry of Education), Peking University, Beijing, People's Republic of China

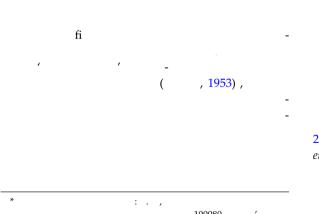
<sup>3</sup> School of Psychology, Beijing Normal University, Beijing, People's Republic of China

<sup>4</sup> The Affiliated Brain Hospital of Guangzhou Medical University, Guangzhou, People's Republic of China

<sup>5</sup> Beijing Institute for Brain Disorders, Capital Medical University, Beijing, People's Republic of China







<sup>, , 100080, &#</sup>x27; . ( : . . ) t

<sup>&</sup>lt;sup>2</sup> School of Life Sciences, Peking University, Beijing, People's Republic of China

<sup>-</sup>fi .

<sup>) (</sup> et al. 2007). fi , ' , 1953), fi :

<sup>(...</sup> et al. 1999; et al. 2001; et al. 2004; & , 2005, 2009; et al. 2005; et al. 2006; et al. 2008, 2009; et al. 2012b).

1.9 ( *et al.* 2007). 3.0 ( ). fi ' et al. 2012*a*, 2013*b*), et al. ( 1 ) ( , 2009; 2004; *et al.* 2007; & *et al.* 2012*a*). ( et al. 2012b), ( *et al.* 2007; *et al.* 2010), , ( *et al.* 2013*a*, *b*). ( ), ( ) fi fi / -( fl ; *et al.* 2007), & , 2003; & , 2005). ( fi ( fi . et al. 2012a, 2013b; ) (... ( et al. <mark>2016</mark>). ) / ( et al. 2004; et al. 2007; et al. 2012b). et al. ) ( (2004) *et al.* 2004, 2009; & ( , 2012; , **2013**; et al. & , *et al.* (2016) 2016). ,

( )

(

/

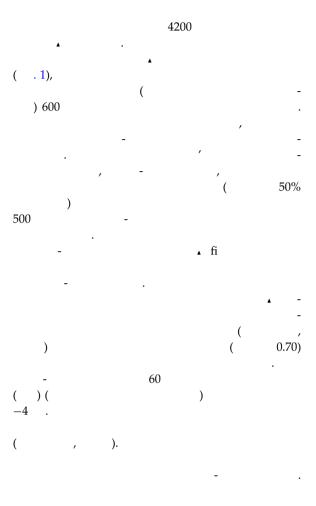
, fi . ( - ) ( et al. 2005; et al. 2014)

( et al. 2012; et al. 2012).

( : , ) fi -1.0 - -, 1.7 ( )*et al.* 2016).

.

( ), 9.5 8( 5.2( )31 )15.2( ) 8( 242( )0 -) .2( )14.( - ( ) ( et al. 1996),

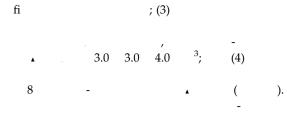


3.0-( 4-6,5680 ) ) . 33 : 64 64 \_ ( з; 3.44 3.44 4.6 . ٨ : 9000 : 2000 ; ; : 30 ; fl :90;fi : 211 211 <sup>2</sup>). 1-\_ 256 188 (256 з, 1 1 1 : 8.2 ; ; fl : 3.8 : 7, ).

#### MRI a a а a a

Pre-processing





,

# Random-effect analyses

fi . ,

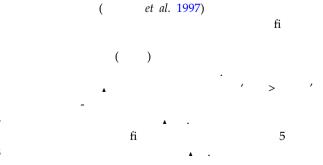
et al. 1996). (

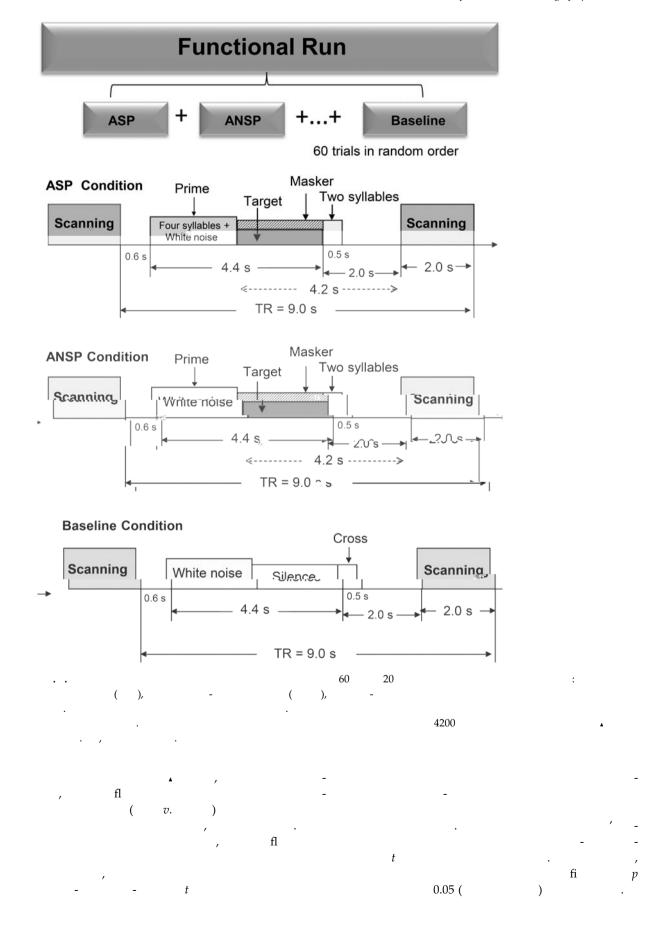
2 ( 2 ) ). F ( • > >

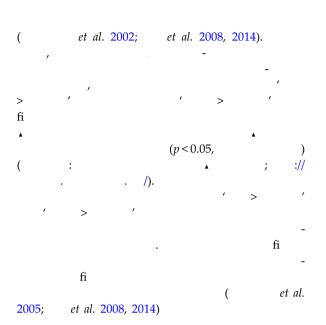
\_

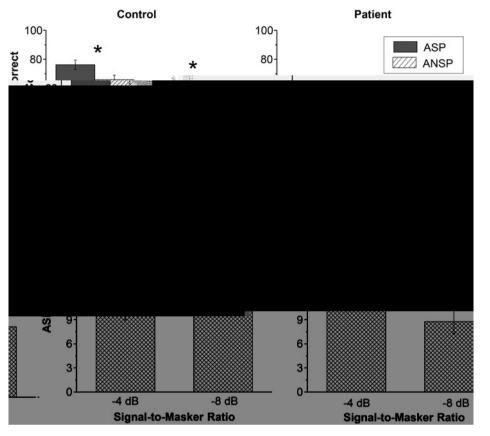
## Psychophysiological interaction (PPI) analyses

.







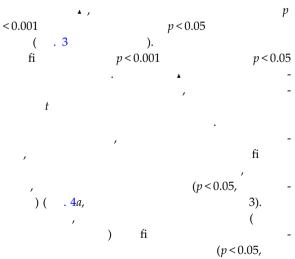


: . . : ( ) -4-8\_ . \_ ( )--4 -8, .\* *p*<0.05.

-8, p< ( 0.001). < 0.001 . 2 ( ( , fi ),  $(F_{1,72} = 6.880, p = 0.011)$ -4-8 $(F_{1,72} = 7.192, p = 0.009).$ t

# Ba a a b

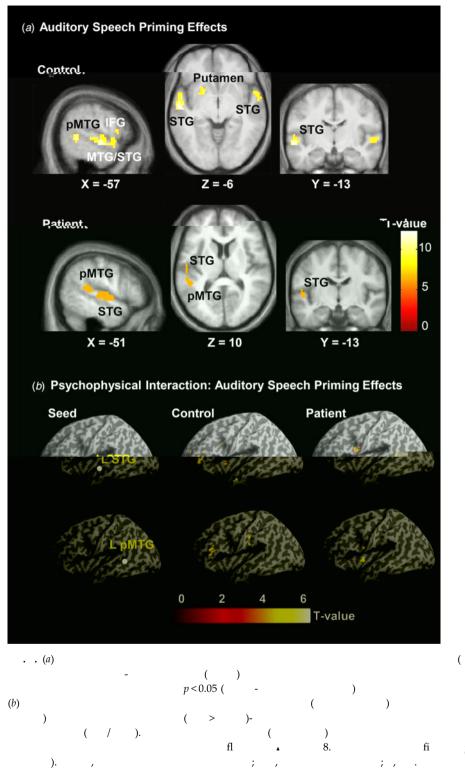
2 ( 2 ( ) : : , , ) v.) ( fi , ( ), ( ), ( ), , ( . 3 2; F fi *p* < 0.05 -) ). ( v. fi



:

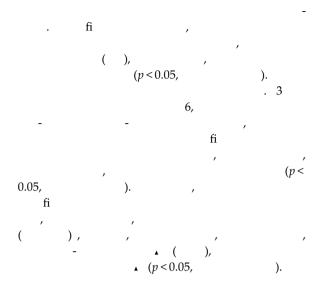
) ( . 4*a*, 3).

"4;314\*+\*,642.8557ζ;;;)'2(6\*-+'46`)46+`ž+763-\$462'1&3:+67/8:'43`\_#'6`´´fl'8´´´Ĭ\_Ž´´`79(0)8848+!'2(6\*-+!46+8-6274,97+`':'/1(1+'8 .8557ζ;;;)'2(6\*-+'46`)46+`8-627.8557ζ`\*4/46`\_´´\_´\_ff%´`L`{{fl}f`´`'Ł\_fi

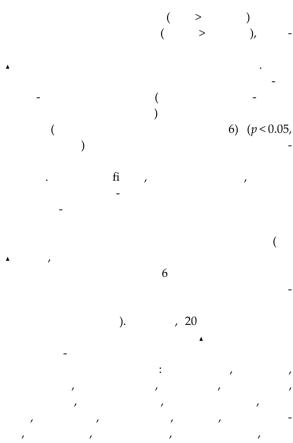


( ) ( / *k*, *p* < 0.05 (

- , - 0.05, ) ( , - (p< , - 0.05, ) ( . 3 ( - ) - 6). , -



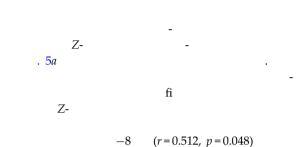
*Schizophrenia-related changes in functional connectivity for speech listening* 



, Z- ( ) 190 - , -



*Correlation between strength of functional connectivity and speech-recognition performance* 



#### Ba baaa bASP

fi ( et al. 2004; et al. 2007; & , 2009; et al. 2010; et al. 2012b, 2013a) ( et al. 2012b), -

-	)	(
	). fi	-
(	)	
	fi	
fi		-
	, , , <del>-</del>	
	fi	-
	: ,	
,	/	

. , fi-



### ASP- a a STG/ MTG

# : (1)

( et al. 2001; et al. 2008; et al. 2008; et al. 2010)

( - *et al.* 2005),

; (2) , fi , \_\_\_\_\_, ( \_\_\_\_\_\_\_, et al. 1996; et al. 1997; et al. 2000; et al. 2012).

( *et al.* 2014),

( et al. 2008), ( & , 1981), ( et al. 2001). / fl

fi ( *et al.* 2007).

Faaaaa aaaaaa

( et al. 2007),

# ( *et al.* 2012*a*, 2013*b*; *et al.* 2016).

et al. (2012) - fi fi - fi fi

, -( et al. 2003) -▲ ( et al. 2007). , ( & , 2014)

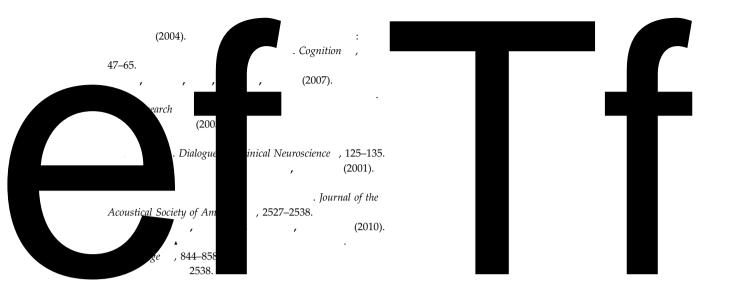
et al. 2002; et al. 2012; • et al. 2014; et al. 2014; & , 2014). ,

		fi			
· · · · -				-	
				-	
	,			-	
	-	fi	•	-	

•

(4)

(5)



, , , (2009).

. Human Brain Mapping , 4138–4151.

. Frontiers in Human Neuroscience, 36.

(2008). : ( ) 400. Nature Reviews. Neuroscience , 920–933. (2013).

. PLOS ONE , 62258. , , , (2014). -

: . Psychiatry Research , 261–267. , , , , (2008).

. NeuroImage , 1352–1363.

, , , (2004).

Journal of Experimental Psychology. Human Perception and Performance , 1077–1091.

, (2012).

- . Schizophrenia Bulletin , 285–294.

, (2008). -. Brain , 945–961.

, , , , (2014).

' . Cerebral Cortex , 1422–1435.

(2001). - / . Human Brain Mapping , 131–143.

: Journal of Neuroscience , 9095–9102.

, , (2015). ;

. Journal of the American Academy of Audiology , 559–572. (2009). , , . Cortex , 1111–1116. (2013). , 58–66. . Hearing Research (2009). , , , . Journal of the Acoustical Society of America , 1737-1743. (2004). , , , . Journal of the Acoustical Society of America , 813–821. (2003). , . Speech Communication , 23–34. (2004). ( ), . Chinese Mental Health Journal , 45–47. (2009). fi : . Cerebral Cortex , 1493-1503. (2012). . Journal of Neuroscience , 8443–8453. (2014). , , fl . . Journal of Experimental Psychology. Human Perception and Performance , 186–199. , fl (2012). fi : . BMC Neuroscience , 119. (2007). . Cerebral Cortex , 171–181. (2005). , . Current , 219–224. Opinion in Neurobiology , , (2005). . NeuroImage , 417–428. (1981). , . Archives of Neurology , 486–490. (2011). , : . Frontiers in Systems Neuroscience , 1. (2013). , :

. Frontiers in Psychology

(2013). . Journal of , 19212–19222. Neuroscience , (2015). ▲ . NeuroImage , 208–214. (2012). NeuroImage , 1490–1502. (2003). . Journal of Clinical Psychiatry , 663–667. (2013a). , , , . Journal of the Acoustical Society of America , 281- 285. (2012a). fi -. Schizophrenia Research , 33–41. (2013b). , , . Schizophrenia Research , 594–595. (2012b). Hearing Research , 136–143. (2005). . Hearing Research , 1–10. (2014). , , Neuroscience Bulletin , 490-496. , , (2007). . Speech Communication , 892–904. , - (2014). \_ . Brain Connectivity , 53–69. (2016). Psychological Medicine , 477–491.

(2010).

3396-3408.

Brain