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摘要 抑制控制是执行功能的重要组成部分之一，研究表明抑制控制与额叶区域的活动有关。经颅直流电刺激(Transcranial Direct Current Stimulation, tDCS)是一种非侵入性的脑刺激技术，可以调节脑区的激活程度。研究表明tDCS刺激额叶的部分区域可以有效干预参与者的抑制控制水平，而这一干预作用会受到刺激位置、刺激类型以及实验任务等条件变化的影响。目前tDCS已应用于不同人群的抑制控制研究，并能与其他研究技术较好的结合。

关键词 抑制控制；反应抑制；tDCS；额下回；背外侧前额叶；前辅助运动区

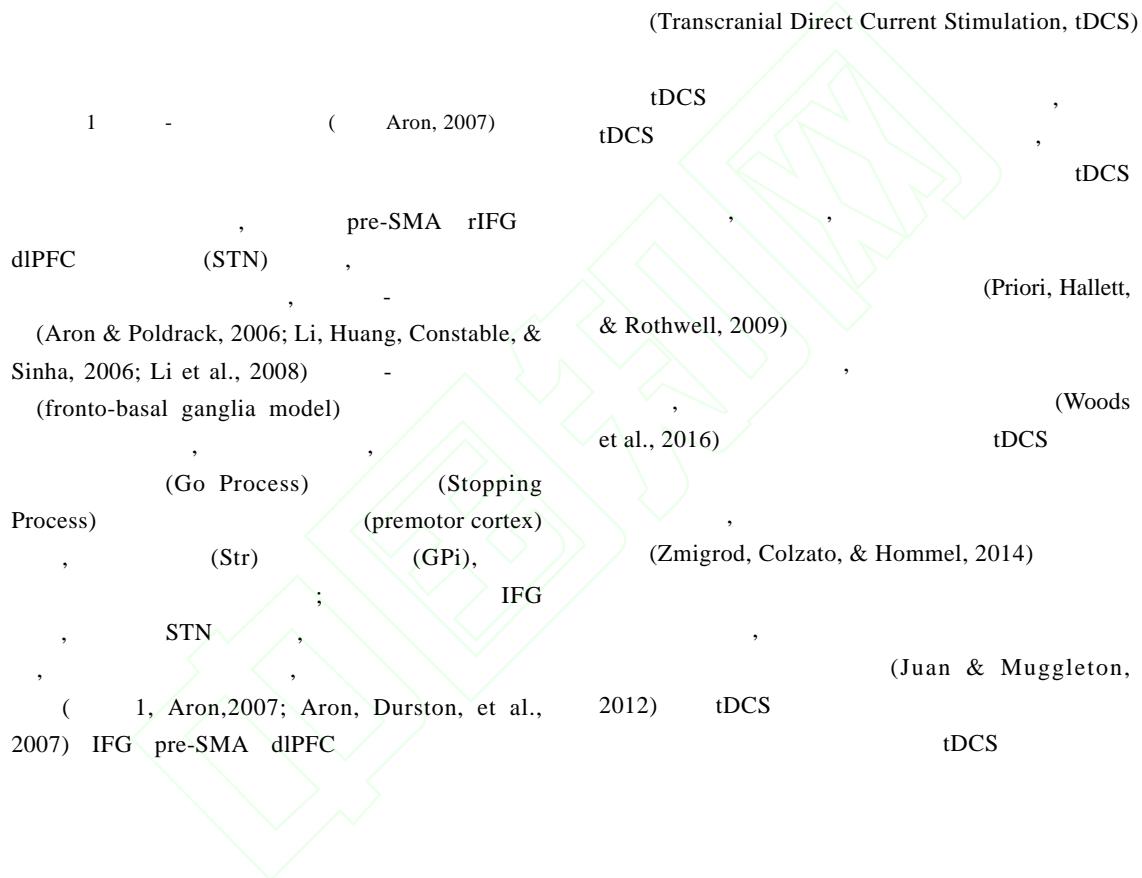
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(Aron & Poldrack, 2006; Chikazoe et al., 2009; Zandbelt, Bloemendaal, Hoogendam, & Vink, 2013)

2 tDCS



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tDCS IFG,
IFG , STN

, ,
,

(Chambers, Garavan,
& Bellgrove, 2009) 10 , tDCS

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tDCS
Stop Signal (SST) Go/No-Go
(GNG) Stop Signal ,

,

(reactive inhibition),
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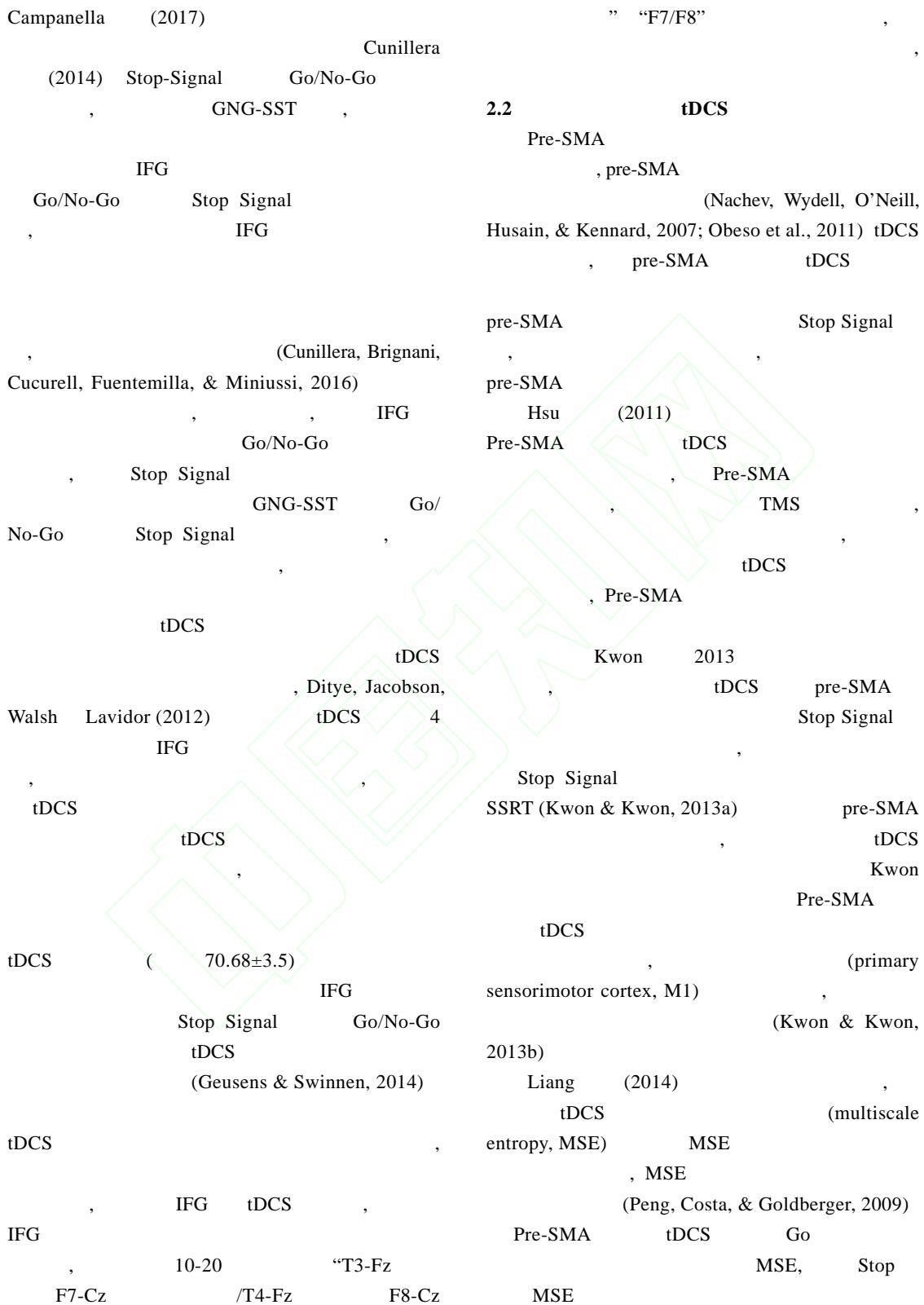
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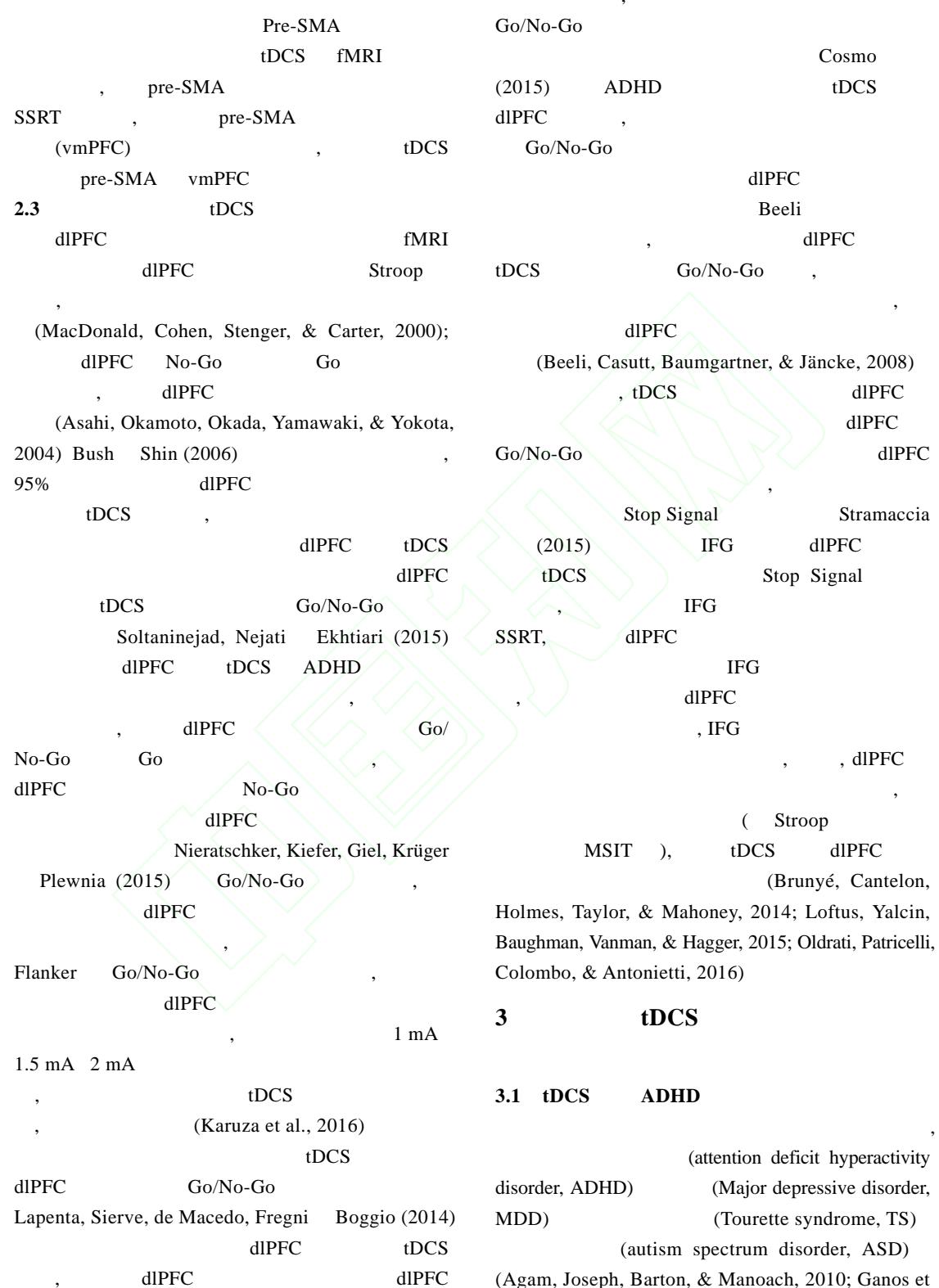
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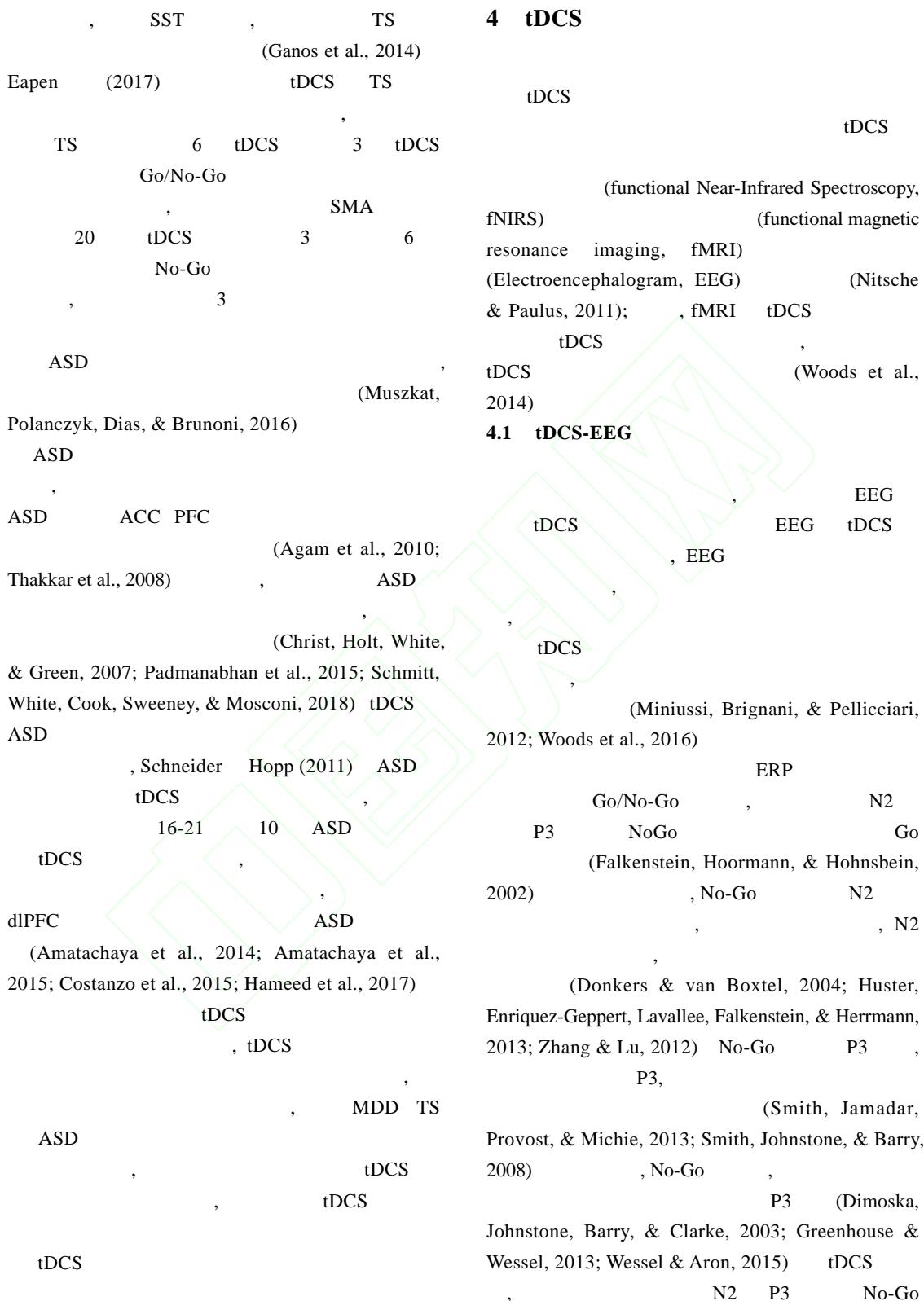
(proactive inhibition),

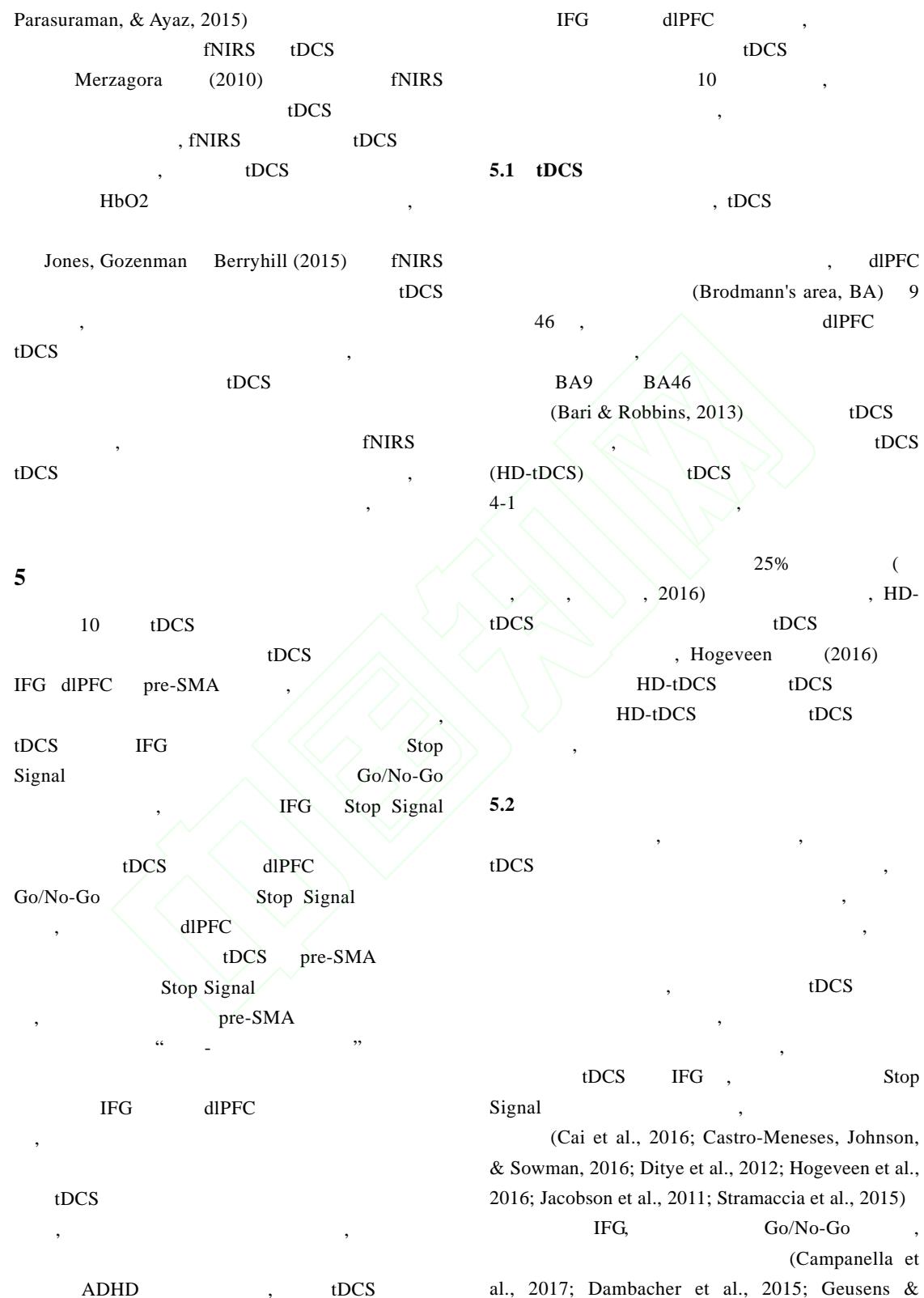
(Cunillera, Fuentemilla, Brignani, Cucurell, &
Miniusi, 2014; , , 2015)

2.1 tDCS
tDCS









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Effects of transcranial direct current stimulation (tDCS) on the frontal lobe region on inhibitory control

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Abstract: Inhibitory control is an important part of executive function. Studies have showed that inhibitory control is in connection with activities in the frontal lobe region. Transcranial direct current stimulation (tDCS) is a kind of non-invasive brain stimulation that can regulate activation intensity of the brain region. Studies have shown that tDCS on partial region of the frontal lobe can effectively interfere with the level of inhibitory control of the participants, and this intervention can be affected by changes in such conditions as location and type of the stimulation, and experimental tasks. At present, tDCS has been applied to the studies on inhibitory control of different populations, and can be better combined with other research techniques.

Key words: inhibitory control; response inhibition; tDCS; IFG; dlPFC; pre-SMA