



### The Role of $\gamma$ -Aminobutyric Acid Receptor in The Social Anxiety Disorder

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#### **Abstract**

Social anxiety disorder (SAD) is the one of the most common anxiety disorders. Despite its high prevalence, the disorder is still considerably undiagnosed and untreated. The disease places a massive burden on patient's lives, affecting not only their social interactions but also their educational and professional activities, thereby constituting a severe disability.  $\gamma$ -aminobutyric acid (GABA) system is known as mediator that play a crucial role in the pathophysiology of anxiety disorders. GABA<sub>A</sub> receptors that contain the  $\delta$  subunit ( $\delta$ GABA<sub>A</sub> receptors) are expressed in multiple types of neurons. Thus, this article reviews the role of GABA<sub>A</sub> receptors in anxiety disorders. It has been reported that reduction of GABA<sub>A</sub> receptor function may be related to the pathophysiology of anxiety. These receptors regulate a variety of important behavioral functions, including memory, nociception and anxiety and may also modulate neurogenesis. Recent studies have reported that GABA<sub>A</sub> receptors can be novel therapeutic targets for the treatment of mood disorders. Pervious findings reported the implicating of the GABA system in the pathophysiology of anxiety disorders. Also, they considered the potential role of agents that modulate GABA neurotransmission in the treatment of these disorders. In conclusion, this review suggests that GABA<sub>A</sub> receptors are neuromodulators for the physiology and pathophysiology of anxiety and they may constitute a novel therapeutic approach in the treatment of these disorders.

**Keywords:** Anxiety Disorder, GABA<sub>A</sub> Receptor, Neuromodulators.

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