# INPLASY PROTOCOL

To cite: Zeng et al. Electrophysiological indicators predict treatment response in anxiety: a meta-analysis. Inplasy protocol 202050040. doi: 10.37766/inplasy2020.5.0040

Received: 11 May 2020

Published: 11 May 2020

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Support: No.

**Review Stage at time of this submission: The review has not yet started.** 

Conflicts of interest: No.

# Electrophysiological indicators predict treatment response in anxiety: a meta-analysis

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**Review question / Objective:** Does the electrophysiological indicators of anxiety disorder can predict the treatment response of anxiety disorder before treatment?

Condition being studied: Anxiety disorder including specific phobia or social anxiety disorder or agoraphobia or panic disorder or panic disorders or generalized anxiety disorder or pediatric anxiety or pediatric anxiety disorder or separation anxiety disorder.

Eligibility criteria: 1. The patients are diagnosed as anxiety disorder by the DSM or ICD. 2. Anxiety disorder is including: specific phobia (SP), agoraphobia (AG), social anxiety disorder (SAD), panic disorder (PD), and generalized anxiety disorder (GAD) and pediatric anxiety disorder OR pediatric anxiety disorders OR separation anxiety disorder. 3. We don't limit the age range of patients due to an early onset of anxiety. 4. At least 10 people were involved in the final analysis 5. Taking electrophysiological indicators before treatment to predict the treatment response.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 11 May 2020 and was last updated on 11 May 2020 (registration number INPLASY202050040).

### INTRODUCTION

**Review question / Objective:** Does the electrophysiological indicators of anxiety disorder can predict the treatment response of anxiety disorder before treatment? Condition being studied: Anxiety disorder including specific phobia or social anxiety disorder or agoraphobia or panic disorder or panic disorders or generalized anxiety disorder or pediatric anxiety or pediatric anxiety disorder or separation anxiety disorder.

#### **METHODS**

Participant or population: Types of study to be included: A. The patients are diagnosed as anxiety disorder.B. Anxiety disorder is including:specific phobia (SP),agoraphobia (AG), social anxiety disorder (SAD), panic disorder (PD), and generalized anxiety disorder (GAD) and pediatric anxiety disorder or pediatric anxiety disorders or separation anxiety disorder. C. We don't limit the age range of patients due to an early onset of anxiety. D. At least 10 people were involved in the final analysis. E. Taking electrophysiological indicators before treatment to predict the treatment response. Types of study to be excluded: A. The primary diagnosis isn't anxiety disorder. B. No original data included.

Intervention: Intervention methods can include drug and/or psychological intervention.

**Comparator:** The degree of treatment response can be quantified categorically (response/non-response) or dimensionally (degree of response). The treatment effect can be self-controlled or compared with a control group.

**Study designs to be included: Randomised** Controlled Trials and Clinical Trials.

Eligibility criteria: 1. The patients are diagnosed as anxiety disorder by the DSM or ICD. 2. Anxiety disorder is including: specific phobia (SP), agoraphobia (AG), social anxiety disorder (SAD), panic disorder (PD), and generalized anxiety disorder (GAD) and pediatric anxiety disorder OR pediatric anxiety disorders OR separation anxiety disorder. 3. We don't limit the age range of patients due to an early onset of anxiety. 4. At least 10 people were involved in the final analysis 5. Taking electrophysiological indicators before treatment to predict the treatment response.

Information sources: We serach studies in following MeSH-Terms: (Anxiety OR anxiety disorder OR anxiety disorders OR phobia OR specific phobia OR specific phobias OR social phobia OR social anxiety disorder OR social anxiety disorders OR agoraphobia OR panic disorder OR panic disorders OR generalized anxiety disorder OR generalized anxiety disorders OR pediatric anxiety OR pediatric anxiety disorder OR pediatric anxiety disorders OR separation anxiety disorder OR separation anxiety disorders) AND (ERP OR EEG OR event related potential OR electrical activity OR evoked potential) AND (mark OR neuromarker OR marks OR predict OR predictor OR predicts OR prediction OR response OR esponse OR remission OR treatment response OR responsiveness OR nonresponse OR nonresponse OR responder OR non-responder OR outcome or treat outcome or outcome predict).

Main outcome(s): The degree of treatment response can be quantified categorically (response/non-response) or dimensionally (degree of response). And it can be predicted by the electroencephalophysiological indicators before intervention.

Quality assessment / Risk of bias analysis: Cochrane risk of bias tool will be used to assess the risk of bias in studies by two independently team members.Sensitivity analyses will be conducted as appropriate to determine the robustness of the findings.

**Strategy of data synthesis:** The electrophysiological predictors from reviews will be qualitatively summarized and presented in a table. We will conduct a a narrative synthesis. It will reflect the following content: the effects of predictor variables will be compared in general; (2) the predictor variables for the different treatment modalities will be compared.

Subgroup analysis: Narrative analyses will be provided the following content: comparing the predictor variables for the different treatment types.

Sensibility analysis: If necessary, sensitivity analysis using standards will be performed.

## Language: English.

Country(ies) involved: China.

**Keywords:** Event related potential; anxiety disorder; treatment response.

# **Contributions of each author:**

Author 1 - Cong Zeng - Author 1 drafted the manuscript and did searched strategy, selection of studies and analysis of results. Author 2 - Jianqin Cao - She controlled the quality of the research and provided feedback and approved the final manuscript.

Author 3 - Xiaoyan Yang - The author did selection of studies , data extraction and analysis of results.

Author 4 - Ci Li - The author did analysis of results and drafted the manuscript.