# INPLASY PROTOCOL

To cite: Xing et al. Acupuncture Treatment on Attention Deficit Hyperactivity Disorder: a protocol for systematic review and meta analysis. Inplasy protocol 202140022. doi: 10.37766/inplasy2021.4.0022

## Received: 05 April 2021

Published: 05 April 2021

# Corresponding author: Rong Zhao

kmzhaorong@qq.com

### **Author Affiliation:**

Yunnan university of Chinese medicine

Support: YNTCM.

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

Conflicts of interest: None declared.

# Acupuncture Treatment on Attention Deficit Hyperactivity Disorder: a protocol for systematic review and meta analysis

Xing, LW<sup>1</sup>; Ren, ZQ<sup>2</sup>; Yue, XW<sup>3</sup>; Chen, HX<sup>4</sup>; Xia, CL<sup>5</sup>; Liu, F<sup>6</sup>; Dong, QZ<sup>7</sup>; Wu, KN<sup>8</sup>; Zhao, R<sup>9</sup>.

**Review question / Objective:** Types of participants: ADHD patients with clear diagnostic criteria. Types of interventions and comparators: The intervention group received traditional acupuncture or other treatment methods, while the control group received sham acupuncture or placebo drugs or proven targeted therapy (such as Western medicine, behavioral therapy, etc.).Types of outcomes: The primary prognostic indicators are effectiveness, and the secondary prognostic indicators are symptoms or symptom scores (Connors Child Behavior Scale, Hyperactivity Index, etc.), adverse reactions, etc. Types of studies: The selected articles should be Randomized Controlled Trials (RCT) and Clinical Controlled Trials (CCT).

**Condition being studied:** Attention Deficit Hyperactivity Disorder (ADHD) is the most common behavioral disorder in childhood. Acupuncture treatment of ADHD has formed a relatively systematic theoretical and clinical treatment system which achieved satisfactory results. However, there has been no systematic evaluation of its effectiveness and safety. The purpose of this study was to evaluate the efficacy and safety of acupuncture in the treatment of attention deficit hyperactivity disorder (ADHD).

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 05 April 2021 and was last updated on 05 April 2021 (registration number INPLASY202140022).

## **INTRODUCTION**

**Review question / Objective: Types of** participants: ADHD patients with clear diagnostic criteria. Types of interventions and comparators: The intervention group received traditional acupuncture or other treatment methods, while the control group received sham acupuncture or placebo drugs or proven targeted therapy (such as Western medicine, behavioral therapy, etc.).Types of outcomes: The primary prognostic indicators are effectiveness, and the secondary prognostic indicators are symptoms or symptom scores (Connors Child Behavior Scale, Hyperactivity Index, etc.), adverse reactions, etc. Types of studies: The selected articles should be Randomized Controlled Trials (RCT) and Clinical Controlled Trials (CCT).

**Condition being studied:** Attention Deficit Hyperactivity Disorder (ADHD) is the most common behavioral disorder in childhood. Acupuncture treatment of ADHD has formed a relatively systematic theoretical and clinical treatment system which achieved satisfactory results. However, there has been no systematic evaluation of its effectiveness and safety. The purpose of this study was to evaluate the efficacy and safety of acupuncture in the treatment of attention deficit hyperactivity disorder (ADHD).

### **METHODS**

Participant or population: ADHD patients with clear diagnostic criteria.

Intervention: The intervention group received traditional acupuncture or other treatment methods.

**Comparator:** The control group received sham acupuncture or placebo drugs or proven targeted therapy (such as Western medicine, behavioral therapy, etc.).

**Study designs to be included:** The selected articles should be Randomized Controlled Trials (RCT) and Clinical Controlled Trials (CCT).

Eligibility criteria: Types of participants: ADHD patients with clear diagnostic criteria. Types of interventions and comparators: The intervention group received traditional acupuncture or other treatment methods, while the control group received sham acupuncture or placebo drugs or proven targeted therapy (such as Western medicine, behavioral therapy, etc.).Types of outcomes: The primary prognostic indicators are effectiveness, and the secondary prognostic indicators are symptoms or symptom scores (Connors Child Behavior Scale, Hyperactivity Index, etc.), adverse reactions, etc. Types of studies: The selected articles should be Randomized Controlled Trials (RCT) and Clinical Controlled Trials (CCT).

Information sources: Comprehensive retrieval databases include the following databases :Cochrane Library, PubMed, EMbase; Chinese Academic Journal Fulltext Database (CNKI), Chinese Biomedical Literature Database (CBMdisc), Weipu Chinese Science and Technology Journal Full-text Database (VIP), Wanfang Data Knowledge Service Platform (Wanfang), the time limitation is from the construction of the library to September 2019.

Main outcome(s): The primary prognostic indicators are effectiveness.

Additional outcome(s): The secondary prognostic indicators are symptoms or symptom scores (Connors Child Behavior Scale, Hyperactivity Index, etc.), adverse reactions, etc.

Quality assessment / Risk of bias analysis: The Cochrane risk bias assessment tool will be used to evaluate the methodological quality of the included literature: including random methods, allocation hiding methods, blind methods, baselines, intentionality analysis, number of missing follow-ups, and reasons for withdrawal, and the quality of the literature was classified as A (Less bias), B (medium bias), C (high bias). The literature included in the evaluation will be independently evaluated by 2 reviewers (Hongxi Chen and Chunlin Xia) in the research team, and in case of disagreement, a third reviewer (Fan Liu) will participate in the discussion and settlement.

Strategy of data synthesis: Endnote X9.0 will be used to manage the retrieved studies. Preliminary screening involves reading titles and abstracts to eliminate

duplicates and ineligible studies. Rescreening involves reading the full text and selecting studies based on inclusion and exclusion criteria. Differences between the two reviewers will be resolved through discussion, with a third reviewer consulted if necessary.

Subgroup analysis: Subgroup analysis will be performed based on the results of data synthesis if the heterogeneity is high. The following subgroup analyses will be considered: intervention methods (type, time) and measures used in clinical trials.

Sensitivity analysis: Choose different statistical models (FE / RE) for metaanalysis of outcome indicators, and evaluate the combined effect. If there is no substantial change in the results before and after the sensitivity analysis, the metaanalysis results are more credible; if the sensitivity analysis results are significantly different, it indicates that the meta-analysis results are less robust, that is, there are potential other factors related to the effect of the intervention, Therefore, the interpretation of the results should be more conservative.

Country(ies) involved: China.

Keywords: Attention deficit hyperactivity disorder; Acupuncture; Comprehensive treatment; Meta analysis; protocol.

### **Contributions of each author:**

Author 1 - Liwei Xing. Email: 1791536722@qq.com Author 2 - Zeqin Ren. Email: 346682574@qq.com Author 3 - Xianwu Yue. Author 3 - Xianwu Yue. Author 4 - Hongxi Chen. Author 5 - Chunlin Xia. Author 5 - Chunlin Xia. Author 6 - Fan Liu. Author 7 - Qinzuo Dong. Author 8 - Kenan Wu. Author 9 - Rong Zhao.