

Research Article

Efficacy And Safety Of Acupuncture For Depression: A Narrative Review Of The Evidence

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Abstract

Depression is a common disorder which is associated with various other ailments. Many therapeutic options are available, including drugs and somatic therapies. Over the past decade, an increasing number of studies have been conducted to investigate the effects of acupuncture on depression. Acupuncture is a safe, feasible and effective treatment method in relieving the symptoms of depression. The basic science of acupuncture in TCM is to clear the blockages in the meridians and ensuring proper Qi flow. It also emphasizes in the individual treatment approach rather than generalisation. This review aims to provide an update and understanding of the acupuncture therapy on the disease. It is found that acupuncture also helps to reduce the side effects of anti-depressants and an effective adjuvant therapy. To improve the clinical efficiency, an individualistic approach can be adopted, and acupuncture may be given as an individual therapy to improve the depressive symptoms. This review of the literature was conducted following the 'Scale for the Assessment of Narrative Review Articles' (SANRA) methodology for quality assessment.

Keywords: Acupuncture, Depression, Review, TCM, Depressive symptoms

Introduction:

Depression is a common mental disorder, which involves depressed mood or loss of interest to do a certain activity for an extended period. (Patel et al., 2006) Globally around 5% of the adults suffer from depression and it is also established that women are affected more than men. This is combined with negative thoughts, suicidal feelings subsequently leading to disruptive behaviours. (Srinath et al., 2005) In study conducted in India, it was found that regardless of age, individuals at any age are affected by depression including children.

Various therapeutic options are available for depression. Electro convulsive therapy (ECT) is an effective short-term treatment for depression, which is found to be more effective than drugs. (UK ECT Review group 2003; Prudic et al., 1990) In a study it was established that bilateral ECT is more effective than unilateral ECT when given at higher doses. (Slade et al., 2017) ECT was also found to be effective in reducing the short-term re-admissions in the inpatient psychiatric department. (Antal et al., 2017; Undurraga, J., & Baldessarini R.J 2012) Transcranial Direct Current Stimulation (tDCS) is the technique which delivers weak currents to the brain through electrodes placed on the scalp, which is found easy to use, safe and tolerable. (Mutz et al., 2019) But evidence states that the effect of tDCS remains less effective than that of the anti-depressant drugs. (Shah et al., 2014) Vagus Nerve Stimulation (VNS) is another successful method used to treat depression; this method is not seen to be the therapeutic choice. Several other somatic therapies such as magnetic seizure therapy (MST),

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phototherapy, Deep Brain Stimulation (DBS), Transcranial Magnetic Stimulation (rTMS) which have proven significant effect of varying degrees for patients with depression.

Pharmacotherapy yields to be a safe and easy to adopt treatment choice for patients. Selective serotonin re-uptake inhibitors serve to be the gold standard treatment for depression, yet new class of anti-depressants always arise and are being tested for its efficacy. (Cozanitis D.A. 2016; Domino E.F. 1999) The study to find the structure of histamine in a mean to find its antagonist which was synthesised in 1937 had been the beginning of different anti-depressants discovery.

(Lopez et al., 2007) Iproniazid, first defined anti-depressant since 1957, which was later found to have various side effects owing to the nature of irreversible inhibition of monoamine oxidase to an extent such as lethal intracranial haemorrhages, which lead to the reduced use of the medicine. This class of anti-depressants are only prescribed when ECTs are contraindicated. Selective Serotonin Reuptake Inhibitors (SSRIs) was another class of drugs used for the management of depression, which still established to cause fewer adverse effects. (Jakubovski et al., 2016; Amick et al., 2015) The available ones in the market are fluoxetine, sertraline, paroxetine, fluvoxamine, citalopram, and escitalopram, which cause minor side effects which are mostly sexual and digestive related complaints. Other recorded side effects are irritability, anxiety, headaches, and insomnia. (Papakostas G. I., & Fava, M., 2007) There are also other classes of anti-depressants which are widely used such as duloxetine, desvenlafaxine, venlafaxine, reboxetine, trazodone is prescribed one over the other. Some are sedatives and other hypnotics rather than an actual anti-depressant.

In general, some antidepressants show moderate evidence and some show weak and other effective when compared to other drugs available. These drugs despite easy availability and use, are not recommended for long term use because of their more frequent and severe side effects. (Cunningham et al., 1994; Kennedy et al., 2006) The most common observed and recorded side effects are sexual dysfunction, sedation, priapism, and cardiotoxicity. The most unpleasant side effect due to which the drugs are discontinued is the Nausea and vomiting. The next group of acceptable therapeutic option is Psychotherapy which involves major intervention modalities such as Cognitive behavioural therapy, Interpersonal therapy, Supportive therapy, and Psychoeducational therapy for which the evidence is not strong. (Qaseem et al., 2016; Malhi et al., 2015; Montgomery et al., 1989) The main considered disadvantage is that the therapy should be continued to prevent relapses and subsequent reduction in the frequency of visit can be designed.

(Zhang et al., 2018; Lu et al., 2016; Kalpanadevi. M 2020) Acupuncture is a minimal invasive therapy which is widely used for various health problems worldwide. (Chen et al., 2018; Yuan, C., & Qi-sheng, T. 2007) There are numerous studies which have stated the efficacy of acupuncture in depression. Yet it has not been found to be therapeutic choice over the western medicine or other somatic therapies. Many studies report the safety of acupuncture in clinical use and its clinical efficacy.

The objective of this review is to find the research gap in the therapeutic option available for depression, which is not yet widely accepted or practiced globally so effectively as needed. This review will focus on the efficacy of acupuncture which is the safe therapeutic option without side effects and identify the reason which is to be addressed that had limited the use of acupuncture for depression.

Methods:

For this review we screened with the keywords, acupuncture, and depression and totally 1477 papers were found. Searching for free full text resulted in 580 results. Studies were removed based on title and abstract screening. Articles from inception to 2020 have been taken for this review. 10 studies were finally taken for review which were RCTs of diverse types. Total of 2078 participants were involved in the study from different regions. Most of the studies were single blinded, few pilot RCTs, very less pragmatic RCTs and one three arm design and one with 5 arm trial. Systematic reviews and meta-analysis which was obtained in the search was also excluded. Two reviewers did the search.

(Baethge et al., 2019) This review of the literature was conducted following the 'Scale for the Assessment of Narrative Review Articles' (SANRA) methodology for quality assessment.

Description of the studies:

The common Inclusion criteria were.

1. Participants of all genders and aged 18 years or older with a clinical diagnosis of depression were included.
2. Interventions included acupuncture alone or in combination with antidepressant medication; the types of acupuncture included Manual Acupuncture (MA), Electro Acupuncture (EA), and Laser Acupuncture.
3. Eligible comparator groups were antidepressants, waitlist, Sham Acupuncture, and placebo acupuncture.
4. The outcome measures were the reduction in the severity of depression with validated tools.

The Outcome measurements were done through- Hamilton Rating Scale for Depression (HAMD), Beck's Depression Inventory (BDI), both HAMD and Self-Rating Depression Scale (SDS), Edinburgh Postnatal Depression Scale (EPDS), Patient Health Questionnaire-9 (PHQ-9), and Bech-Rafaelsen Melancholia Scale.

Review – Various components of acupuncture in depression:

In 10 studies, (Zhao et al., 2019; Zeng et al., 2018; Sun et al., 2013; Zhang et al., 2013) 4 studies used electro acupuncture, and the group was compared with anti-depressants, manual acupuncture, and sham acupuncture.

In study where it was compared with anti-depressants, it was observed that EA combined with anti-depressants served better relief than when anti-depressants were alone given. When EA was compared with MA, it was observed that both produced same effects and the participants found betterment in the HAMD scale score. Another study where EA and Fluoxetine was compared, both had similar curative effects. These demonstrate that EA is effective in an equivalent way to the anti-depressant, and it helps in reducing the side-effect of the drug. When dense cranial acupuncture with Electrical stimulation was used, it was observed that Patients treated with dense cranial electroacupuncture stimulation (DCEAS) had a significantly greater reduction in the 17-item Hamilton Rating Scale for Depression scores and clinically significant response to treatment than those having sham acupuncture (19.4% vs. 8.8%). Neither sham acupuncture nor DCEAS had effects on the platelet serotonin system. In the early phase of selective serotonin reuptake inhibitor treatment for depressed patients, DCEAS could be used as an additional therapy. Neurobiological mechanisms responsible for DCEAS effects warrant further investigation using neuroimaging.

(You et al., 2020) In one study wrist-ankle acupuncture (WAA) was used and thick and thin needles were compared. In this study it was found that there was no difference in the effects in between thick and thin needles. WAA was found effective than the sham acupuncture. The mechanism of this should be explored in further studies. In this study, HAMD scores showed significant improvement in the wrist acupuncture group.

(Wang et al., 2017) When acupuncture and Fluoxetine is compared in sham acupuncture and fluoxetine, the corticostriatal reward circuitry was assessed for modulation. In this study, the corticostriatal rsFC changes pre and post treatment was checked in females. In compared with the sham acupuncture group with fluoxetine, it was found that in verum acupuncture and fluoxetine group, there was a significant improvement in the rsFC in both ventral and dorsal striatal areas with cortical cortices. This results when co-related with depressive symptoms, there was a standardized reduction in the depressive symptoms when compared to the other group.

(Fan et al., 2016) Quality of life score was also significantly improved in the patients who were given acupuncture with moxibustion. (Macpherson et al., 2013) In another study with a sample size of 755 participants, PHQ was assessed, and it was found that acupuncture was better than the usual care given

to the depressive patients. (Fu et al., 2009)The therapeutic effect of acupuncture was found better on depressive neurosis when compared to that of Prozac but with less side effect, which is expected. (Feng et al., 2011) The effect of acupuncture was also observed in malignant related depression, and it was found that acupuncture improved sleep quality and the quality of life of cancer patients.

Limitations:

Results indicate that acupuncture, MA, EA, WAA was superior to the intervention with antidepressants alone or sham acupuncture. The improvement in the depression symptoms was statistically significant, although greater improvement was found when acupuncture was used adjunctively. But limitations of the study must be acknowledged. In most of the studies acupuncture was used in combination with the anti-depressants. To well authenticate the effect of acupuncture in the depressive symptoms, it is required to use acupuncture as a standalone therapeutic option in one arm. Studies also included a generalised protocol for all patients, which is not the essence of TCM principles. TCM emphasizes on an individualised protocol for each patient that would give better results.

Strengths:

The effect of acupuncture was proven as the best adjunctive treatment in relief of depressive symptoms and to minimise the side effects of the anti-depressants. No severe adverse reactions were found in any studies which required a medical care.

Conclusion:

Among participants with different diseases with depression, acupuncture when given in combination with anti- depressants, served better relief and the side effects of the medicine was found to be less. These findings suggest that acupuncture can be an effective treatment option for the depressive patients in relieving their symptoms and improving their quality of life. Considering depression as a distressing life event which occurs with any patients with their discomforts faced, health care professionals should adopt an integrated approach to enhance the well-being of the people.

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