

***"The effects of acupressure on depression, anxiety and stress in patients with hemodialysis: A randomized controlled trial"***

**Abstract:**

**Background**

Patients with [end stage renal disease](#) on [hemodialysis](#) are affected by physiological and psychological stressors, which contribute to poor quality of life and negative clinical outcomes. Depression, anxiety, and stress are highly prevalent in this population. Effective interventional strategies are required to manage these psychological symptoms. [Acupressure](#) has been believed to be one of the complementary therapies that could promote psychological wellbeing.

**Objective**

The aim of this study was to evaluate the effects of acupressure on depression, anxiety, stress, and general psychological distress in patients with hemodialysis.

**Participants**

A total of 108 patients with hemodialysis were randomly recruited into the acupressure group (n = 54) and the control group (n = 54).

**Method**

...The acupressure group received routine hemodialysis treatment plus 15 min acupressure applied three times a week for four weeks. The control group received only usual care with routine hemodialysis treatment. The outcome measurements were the Depression, Anxiety Stress Scales (DASS-21), and general psychological distress using the [General Health Questionnaire](#) (GHQ-28). Statistical analysis was performed using Wilcoxon signed-rank test to compare DASS scales and GHQ-28 scores before and after acupressure intervention.

**Results**

The acupressure group had significantly lower DASS scores and GHQ scores compared to the control group, signifying improvements in depression, anxiety, stress and general psychological distress...

## Conclusion

Findings from this study indicates that acupressure therapy delivered three times a week for four weeks was able to significantly reduce depression, anxiety, stress, and general psychological distress in patients with hemodialysis. This positive finding suggests that acupressure may have a role in promoting psychological wellbeing of patients. Promoting psychological wellness will improve patients' quality of life, and reduce negative outcomes associated with psychological illnesses and distress experienced by patients with hemodialysis.

What is already known about the topic?

- Symptoms of depression and anxiety are highly prevalent in patients with hemodialysis.
- Patients with hemodialysis often experience physiological and psychological stressors affecting their wellbeing and quality of life.

- Previous literature suggests that acupressure may reduce depression, anxiety, and stress.

What this paper adds

- Acupressure intervention applied during hemodialysis was shown to be effective for reducing depression, anxiety, and stress and for improving psychological well-being.
- Acupressure could be a potential adjuvant treatment for other approaches of psychotherapy.

### Introduction:

Hemodialysis is a lifelong treatment that significantly affects the patients physically and mentally ([Wang and Chen, 2012](#)). Adherence to hemodialysis treatment requires the patients to adapt to a number of restrictions such as fluid and diet control, painful [fistula cannulation](#) on dialysis days, financial burdens, and frequent hospital admission due to comorbid diseases. All these conditions contribute to psychological illnesses and distress ([Gerogianni and Babatsikou, 2013](#)).

Unfortunately, despite the high prevalence, psychological symptoms often go unrecognized and untreated. [Johnson and Dwyer \(2008\)](#) reported a high prevalence of untreated depression, with over 70% of patients with depression and anxiety being unaware of their symptoms and they did not acknowledge the need for proper therapy. Most of the dialysis facilities do not routinely screen for mental health problems, thus making them even less likely to be detected. Untreated psychiatric illnesses contribute to increased mortality, reduced quality of life and an increased risk of suicide ([Johnson and Dwyer, 2008](#)). To prevent these detrimental consequences, early diagnosis and treatment for psychological symptoms are urgently needed.

The treatment for psychological illnesses should use pharmacological therapy as well as non-pharmacological therapies such as social support network, [cognitive behavioral therapy](#) and involvement in exercise program ([Wang and Chen, 2012](#)). [Acupressure](#) is one of the

popular complementary therapies which is believed to improve psychological and general health. Acupressure, a technique practised in [traditional Chinese medicine](#), is a method of stimulating 'acupuncture points' or 'acupoints' by applying pressure using hand, fingers or thumb ([Tsay, 2004](#)). Stimulation of acupoints is believed to generate and smooth the flow of energy (Qi), enhancing blood flow, dispelling blood congestion and vitalizing organs ([Freeman and Lawlis, 2001](#)), thereby improving general health. Manual stimulation of [acupuncture points](#) has been shown to increase the production of serotonin and [endorphin](#) as well as improve the regulation of [serum cortisol](#) ([Lane, 2009](#)). Changes in these hormones may reduce anxiety, induce relaxation and directly influence the pathologic mechanism leading to depression. Therefore, acupressure has been recommended as an [adjuvant treatment](#) to other approaches of [psychotherapy](#) ([Lane, 2009](#)).

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**Methods:**

... The selection of [acupoints](#) for depression, anxiety, and stress was based on the concepts of Chinese medicine...

The principles of the protocol are as follows:...

Yin Tang (GV 29)—located at the midway between the medial ends of the eyebrow.

Shenmen (HT 7)—located at the ulnar end of the transverse crease of the wrist, in the small depression between the pisiform and [ulna](#) bones. For this point, acupressure is applied only on the non-fistula hand.

Taixi (KI 3)—located at the midway between the tip of the [medial malleolus](#) and the attachment of the [Achilles tendon](#), level with the tip of the medial malleolus. For this point, acupressure is applied on both legs.

**Discussion:**

Baseline data showed a high prevalence of depression, anxiety, stress and general psychological distress. Nearly 50% of the study participants were shown to have depression, anxiety and psychological

distress, and 35.2% presented stress symptoms. This suggests that clinicians and nurses should pay attention toward the development of effective interventional models for enhancing psychological wellness...Results from this study indicated that [acupressure](#) significantly reduced depression scores. This finding is congruent with the findings from previous studies conducted on patients with [hemodialysis](#)...Acupressure also significantly reduced anxiety, a result that is consistent with previous studies conducted among patients with chronic obstructive pulmonary disease on [mechanical ventilation](#) ([Tsay et al., 2005](#)). ...The finding of this study indicated a significant reduction in stress in patients after receiving four weeks of acupressure...This study also showed that acupressure was able to significantly reduce general psychological distress with the exception of domain measuring social dysfunction. The [GHQ](#) total score and the sub-scores for somatic symptoms, insomnia/anxiety and severe depression were significantly lower

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after acupressure intervention. The reduction in insomnia/anxiety score was highly significant...Improved sleep quality might contribute to psychological and general wellbeing that might reduce the somatic symptoms that appear in distressed patients. The reduction in severe depression shown by the GHQ-28 sub-score was congruent with the same result indicated by the DASS-21. The result did not show any positive effect of acupressure on social dysfunction, a domain that is affected by many socio-economic factors. Providing social support combined with acupressure might reduce the overall psychological illness and distress in patients with hemodialysis...The overall study findings indicated that acupressure

reduces depression, anxiety, stress, and psychological distress in patients with hemodialysis. These positive outcomes might be due to the regulation of [neurotransmitters](#) and hormone functions by manual stimulation of acupoints ([Lane, 2009](#)). Regulation of hormone functions and [nervous system functions](#) by application of consistent [fingertip](#) pressure on acupoints may improve sleep and general health, which contributes to reduce psychological symptoms. Therefore, acupressure can be suggested as an [adjuvant therapy](#) for psychological illnesses...The positive finding from this study suggests that [acupressure](#) may have a role in promoting psychological wellbeing of patients.

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