

Herbs As an Adjunctive Modality in Psychotherapy

Shanqiao Jia *

Guangzhou Experimental Foreign Language School, Guangzhou, China

* Corresponding Author Email: 18988839138@163.com

Abstract. The prevalence and co-morbidity of mental disorders such as anxiety disorders, depression and neurosis are very common in modern society. These prevalent mental illnesses have brought many negative effects on people all over the world. As herbal-assisted psychotherapies are becoming more and more recognized, the drawbacks of exclusively Western medication are becoming apparent, including significant side effects and long medication cycles. In recent years, as the use of herbs in medicine has been explored, herbs have also been gradually utilized to alleviate or address the adverse effects of western medications. A large body of literature describes the use of herbal mechanisms as therapeutic tools for psychological disorders, including the tea-drinking method, where kava pepper extracts are made into an agent that regulates the level of neurotransmitters in the brain and reduces feelings of anxiety and nervousness. However, reviews on the use of herbs as adjuncts in psychotherapy are still lacking. This dissertation aims to further identify the adjunctive modalities of different herbs, thus providing useful information on the use of herbs.

Keywords: Herbs; psychotherapy; modality.

1. Introduction

The questionnaire survey released by the Big Data platform shows that mental illnesses have a very high prevalence, with 61.22% of the survey sample articulating that they are surrounded by friends, family members or coworkers who suffer from mental illnesses. Common mental illnesses are anxiety disorder and depression, which are two typical mental illnesses that also have a significant impact on people's daily life. Therefore, the efficient treatment of mental illnesses has become a major problem in society. Nowadays, the vast majority of treatment programs are purely Western medicine. Although most people believe that it is more effective, more people are concerned about the side effects of the drugs and the resistance of the body to the drugs after taking them for a long time. Therefore, integrative therapy (a combination of Western medicine, Chinese herbs, and psychological counseling) has become the treatment option that most people with mental illness rely on.

Although chemically synthesized drugs are effective in psychotherapy, they also have side effects. The side effects are mainly in the following areas. Long-term use of benzodiazepines, such as diazepam, depresses the central nervous system, leading to an adverse reaction of drowsiness and serious interference with the daily activities of the user. The tricyclic antidepressant promethazine tends to negatively affect signaling in the nervous system, making the taker dizzy. Selective 5-hydroxytryptamine reuptake inhibitors (SSRIs) in antidepressants can irritate the intestinal tract, affecting the digestion and absorption function of the user. Long-term use of tricyclic antidepressants can affect the electrical activity of the heart and cause arrhythmias. Some antipsychotic drugs can affect hormone levels and metabolism, increase appetite, and interfere with insulin secretion, triggering elevated blood sugar, increasing the risk of diabetes in patients.

Herbs contain a large number of active ingredients that can regulate neurotransmitters and improve mental status. For example, St. John's wort [1] contains chrysin and flavonoids, which can regulate neurotransmitter reuptake, increase serotonin and dopamine levels in the brain, and effectively relieve depression and anxiety. Certain herbs can reduce stress hormones and relieve tension. Lemon balm [2] contains volatile oils that act on the nervous system, calming and tranquilizing, and reducing stress. Long-term use can regulate the thalamus, pituitary, and adrenal axes and lower cortisol levels. Lavender [3] can be good for improving insomnia symptoms associated with depression. Its aroma and volatile oils can shorten the time to fall asleep and improve the quality of sleep. Compared with

western medicines, herbs act more gently and have fewer side effects, making them more suitable for patients who are not easily able to use western medicines or who seek natural remedies, such as pregnant women, the elderly, and children.

According to the research and analysis of scientists in recent years, the use of herbs in psychotherapy has made remarkable progress. In fact, Chen Yun attempted to combine the theory of herbal medication therapy and mental health education from the perspective of traditional plant culture, with the help of the unique symbolism given to herbs in traditional culture, which effectively improved the mental health of the student population [4]. Wang, W. and other researchers compared the effects of herbal medication with placebo, medication, and the combination of herbal and medication on the combination treatment of predementia. Affirmed the potential benefits of herbs in the treatment of mild cognitive impairment (MCI), and the neuroprotective effects of certain phytoconstituents [5].

2. Pharmacological properties and clinical applications of commonly used Chinese medicines

2.1. Clinical diagnosis and treatment of phlegm-heat syndrome with commonly used Chinese medicines

Prof. Zhou Shaohua published his own treatment of neurological phlegm-heat syndrome, a neuropsychiatric disease. This paper has further confirmed the effectiveness and sustainability of Chinese medicine in the treatment of neuropsychiatric disorders. The core medicines include Gan Cao, Han Xia, Chai Hu, Sour Zao Ren, Huang Ling, Fu Shen, etc., which represent the high-frequency medicines used in this study. The frequency of medication and measurement characteristics are necessary to follow the analysis of the four qi and five flavors attributed to the meridians. According to the analysis of the four qi showed that warm medicines accounted for the most 40.69%, followed by cold medicines 28.71%, flat medicines, cool medicines, and the least hot medicines. The statistics of the five flavors of the drugs showed that the drugs were ranked in ascending order of sweetness, bitterness, pungency, sourness, and saltiness. Finally, Prof. Zhou Shao-hua summarized that the main meridians for the treatment of phlegm-heat syndrome were the heart, lung, spleen and liver meridians, which accounted for more than 60% of the total frequency. Furthermore, the pattern of drug combinations, Professor Zhou Shao-hua used K-means algorithm to cluster the included more than one hundred cases, and 171 flavors of traditional Chinese medicines, forming five core schemes in Table 1 [6].

Table 1. Prof. Zhou Shaohua's core combinations for treating phlegm fever.

No.	Core combination	Quantity
1	Poria cocos - sour jujube nut - Rhizoma Ligustici Chuanxiong - licorice - Radix et Rhizoma Pinelliae - Radix et Rhizoma Pinelliae - Angelica Sinensis	10
2	Radix Bupleurum Chinense - Poria Cocos - Semixia - Radix et Rhizoma Glycyrrhizae - Rhizoma Ziziphi Spinosae	56
3	Acorus calamus - licorice - Poria - Fenghuang - Radix Angelicae Sinensis - Semixia	9
4	Radix et Rhizoma Pinelliae - Acorus calamus - Rhizoma Atractylodis Macrocephalae - Radix et Rhizoma Glycyrrhizae - Radix et Rhizoma Pinelliae - Poria	27
5	Semixia - Poria - Licorice - Angelica sinensis - Polygonatum odoratum	39

2.2. Prevention and treatment of cognitive disorders with commonly used Chinese medicines

Mao Min from the Beijing University of Chinese Medicine has provided some theoretical and practical basis for the prevention and treatment of MCI with traditional Chinese medicine through both literature and clinical work. In her study, she first combed through the ancient medical literature on cognitive impairment-related diseases and explored the etiology of the disease, for example, it is believed that it is related to old age, kidney essence deficiency, phlegm and siltation, etc., which provides a theoretical basis for the prevention and treatment of MCI by traditional Chinese medicine.

Then, we summarized and analyzed the modern clinical research literature on the treatment of mild cognitive impairment (MCI) with traditional Chinese medicine. After summarizing the commonly used Chinese medicines and formulas and their mechanisms of action, it was found that the mechanisms of action of the medicines, which were mostly focused on tonifying the kidney, activating blood and resolving phlegm, might be related to the regulation of neurotransmitters, antioxidant, anti-inflammatory, and so on. In order to observe the effects of the self-formulated Kidney and Brain Enhancement Formula on the cognitive functions of MCI patients, a randomized, controlled, single-blind clinical trial design was adopted, in which 100 MCI patients who met the criteria were randomly divided into the experimental group and the control group, with 50 patients in each group. The experimental group was given Kidney and Brain Enhancement Formula and the control group was given placebo for 12 weeks. Observation indexes included the Brief Mental State Examination (MMSE), Montreal Cognitive Assessment Scale (MoCA), and Activity of Daily Living Scale (ADL). According to the MMSE, MoCA scores, the control group showed significant improvement, suggesting that the Kidney and Brain Enhancement Formula has a certain enhancement effect on the cognitive function of patients with MCI, and the safety is good, there is no serious **adverse reaction** [7].

2.3. Polyphenols in edible herbs

Wenzhi Hao and other researchers documented that polyphenols from edible herbs are useful for targeting gut-brain interactions in depression-related neuroinflammation. Bidirectional communication along the gut-brain axis plays a key role in the pathogenesis of depression, and gut flora disruption can trigger peripheral inflammation and affect neuroinflammation in the brain. However, edible herbs are rich in polyphenols, which have antioxidant, anti-inflammatory and gut flora regulating properties, bringing a viable option for the effective treatment of depression. Studies have shown that polyphenols have mechanistic effects on the gut-brain axis. For example, polyphenols can adjust the composition and function of intestinal flora, increase the number of flora, inhibit the growth of other harmful flora, reduce intestinal permeability, reduce the production of inflammatory factors, and finally regulate the inflammatory signaling of the gut-brain axis. Further, after passing through the blood-brain barrier, polyphenols act directly on the brain's nerve cells to regulate signaling pathways and reduce the release of inflammatory factors, while improving neurotransmitter levels and enhancing their plasticity, thus alleviating depression. Overall, polyphenols from edible herbs have potential in the treatment of depression and are highly likely to be an innovative therapeutic option [8].

2.4. Chemical Composition of Herbal Medicine: Pepper

A study by the Institute of Traditional Chinese Medicine of the Chinese Academy of Traditional Chinese Medicine describes the chemical composition of the Chinese medicine pepper, including volatile oils, which are mainly found in the peppercorns, and the composition and content of which are influenced by many other factors. The common ones are linalool, D-limonene and eucalyptus oil. Alkaloids, including free and quaternary ammonium salts, according to the mother nucleus is divided into four major categories, such as the Inoceramidines, vanillinine, etc... Copper and its glycosides, such as chrysin. Amides, mostly chain unsaturated fatty acid amides. Coumarins, and lignans. Pepper has many effects on the prevention and treatment of neuropsychiatric diseases. For example, it is a brain booster, antidepressant, treatment of Alzheimer's disease, and analgesic. Most of the effects are due to the ability of peppercorns to regulate the stress response of the nervous system, through antioxidant, anti-inflammatory, and protective effects on nerve cells, which can help to relieve anxiety and increase improve improve brain function [9].

2.5. Chaihu Shuohe San

Chaihu Shuohe San has 32 main ingredients, among which paeoniflorin lactone, ferulic acid, naringin, hesperidin, chaihu saponin A, glycyrrhizic acid, platycodin, hesperidin hydrate, chuan

chenpianin and glycyrrhizic acid are the quality markers of traditional Chinese medicines that exert antidepressant effects. The mechanism of action played by Chaihu Shuohe San in antidepressant includes regulating monoamine neurotransmitters, restoring the level of dopamine and other neurotransmitters to normal, regulating and improving the mood, elevating the level of regulating the function of hypothalamus-pituitary-adrenal axis (HPA axis), and decreasing abnormal secretion of cortisol and other hormones triggered by dysfunction of the HPA axis. Promote the growth, survival and differentiation of nerve cells, repair damaged nerves; reduce apoptosis, protect nerve cells; reduce oxidative stress, scavenge free radicals, enhance the body's antioxidant capacity [10].

2.6. Saffron

Saffron belongs to the group of Chinese medicines that activate blood circulation and remove blood stasis, with the effect of regulating qi, relieving depression and tranquilizing the mind, and containing a variety of active ingredients, such as saffron acid, saffronin and saffron aldehyde, which have attracted attention in the field of treatment of psychiatric disorders. In the treatment of various mental diseases, saffron has a very important mechanism role. Animal experiments have shown that saffron extracts or its active ingredients attenuate schizophrenia-like behaviors, and the mechanism may be related to the modulation of neurotransmitter (e.g., dopamine) systems. Regarding depression, crocus sativus alone or in combination with traditional antidepressants can improve depressive symptoms. Its mechanism of action is related to various aspects such as modulation of neurotransmitters, anti-oxidative stress, anti-inflammation and modulation of neuroplasticity. In addition, saffron plays a role in the treatment of anxiety disorders. Animal experiments have shown that saffron extracts can reduce anxiety-related behaviors, and may exert anxiolytic effects by regulating neurotransmitters such as γ -aminobutyric acid (GABA). In conclusion, saffron has a positive effect in the treatment of psychiatric disorders with a favorable safety profile, which is conducive to promoting its widespread use in the treatment of psychiatric disorders [11].

3. Outline of Combination Drugs in Clinical Medicine

Developed by the World Federation of Societies of Biological Psychiatry (WFSBP) and the Canadian Network for Mood and Anxiety Treatment (CANMAT) Task Force, the guidelines for clinicians on the use of nutritional supplements (nutraceuticals) and botanicals (phytopharmaceuticals) in the treatment of psychiatric disorders cover the types and recommendations for the use of nutritional supplements and phytopharmaceuticals in the treatment of different psychiatric disorders, such as depression and anxiety, to guide clinicians in the rational use of these substances in the treatment of psychiatric disorders. It covers the types of nutraceuticals and phytoceuticals that can be considered for different mental disorders such as depression and anxiety, as well as recommendations for their use, etc. The guide instructs clinicians on the rational use of these substances in the treatment of mental disorders, and provides references to other options for the treatment of mental disorders in addition to traditional medications. It demonstrates the feasibility and excellence of nutritional supplements and phytomedicine therapy in the treatment of mental disorders, and reflects the integration of multifaceted professional knowledge and experience, and brings guidance and support for future follow-up progress work [12].

4. Strengths and challenges

Compared to traditional synthetic drugs, herbs are naturally sourced and gentle, with low risk of side effects and addiction. Herbs contain a variety of active ingredients that work synergistically with multiple systems in the body. At the same time, herbs not only improve psychological symptoms, but also effectively regulate bodily functions. For example, it increases energy, improves mental fatigue and depression associated with physical weakness. Compared to synthetic drugs, herbs are very diverse and versatile, offering a wide range of options for different psychological problems. Due to

the long history of herbal applications, they are more likely to be widely accepted. With the development of agriculture, some herbs are easy to grow and obtain at low cost. However, the quality of herbs varies greatly due to various factors such as origin, planting techniques, and harvesting, which can easily affect the therapeutic effect. At the same time, because of the individual response to herbs, the patient's age, health status and physical condition may have different treatment effects. Some herbs used in combination or taken with medications may also - have different levels of side effects. Finally, due to the imperfect regulatory standards of herbal products, it is difficult for patients to choose high quality and safe products. Therefore, the use of herbs in psychotherapy still needs to be improved in the future to solve the uncertainty of their practical application.

5. Future prospects

This overview summarizes the use of herbs in psychotherapy and describes the advantages and challenges of herbs in the marketplace. In the future, herbs can be used as an auxiliary means to realize technological innovation, using supercritical fluid extraction, nanotechnology and other advanced means to accurately and efficiently extract the active ingredients in herbs, and develop new formulations that are more easily absorbed. At the same time, it can also be combined with intelligent digital wearable devices, real-time monitoring of the patient's psychological state and physiological indicators, to achieve personalized psychotherapy programs. Furthermore, herbs can be combined with other non-pharmacological therapies such as music therapy and color therapy to create a multi-sensory fusion treatment program. For some patients with severe mental illnesses, herbs with synergistic effects can be added on top of chemotherapeutic drugs. For example, when using antidepressant drugs with saffron extract, it has the effect of enhancing antidepressant and reducing the side effects of chemosynthetic drugs. Regarding the uncertainty of the quality of herbs, it is recommended to develop strict standards and regulatory systems for the treatment of herbs to ensure the non-pollution of the raw materials of herbs, the standardization of the production and processing process, and the stability and reliability of the product treatment.

6. Conclusion

This review focuses on summarizing and summarizing the use of herbs as an aid in the treatment of mental illness. The breadth, feasibility, and optimization of herbs for therapeutic use are demonstrated. The importance and practicality of herbs as a therapeutic aid in the treatment of mental illness is further validated by examples of cases where herbs have been combined with other therapies. As the use of herbs has been studied in depth, the treatment of mental illness has become more relevant. At the same time, however, the use of herbs for the treatment of mental illnesses still needs to be improved in the future, and the challenges of herbs in future applications need to be solved in collaboration with other parties.

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