

Phytotherapy for depression: A review of the most important medicinal plants of flora of Iran effective on depression

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ABSTRACT

Depression is one of the main affective disorders in community, and a common, debilitating, and dangerous disease which affects the life and behaviors of affected people and has affected many people across the world to date. Avoiding family and friends, lack of motivation, sexual desire disorders, sleep disorder, depressed mood, and lack of pleasure are some of the symptoms of depression. Passing of time and past experiences of humans have caused increase in the use of medicinal plants as a pharmacological resource. Given the necessity of producing nature and plant-based drugs to treat depression and identifying their effective compounds to produce more effective drugs, the aim of this review article is to report the native antidepressant medicinal plants of Iran. *Lavandula officinalis*, *Scrophularia striata*, *Crocus sativum* L, *Zingiber officinale*, *Echium amoenum*, *Oenothera biennis* L., and *Rosa canina* L. are some of the commonly used native antidepressant medicinal plants of Iran with already confirmed antidepressant effects.

KEY WORDS: Depression, Herbal medicine, Phytochemicals, Iran.

1. INTRODUCTION

Depression is not only the most prevalent but also the oldest psychiatric syndrome which has been addressed in different publications (Heydarnejad and Dehkordi, 2010; Nikfarjam, 2013; Hasanpour-Dehkordi and Solati, 2016). The figures of the World Health Organization indicate that over 350 million people worldwide are suffering from depression (Bhutani, 2009; Marcus, 2012). People with depression may become so hopeless that they feel suicidal. Suicidal thoughts are highly frequent, such that 2/3 of people with depression have suicidal thoughts and 10%-15% of them commit suicide (Kaplan, 2008). A variety of factors, including genetic, biochemical, environmental, and psychological, contribute to the incidence of depression (Kaplan, 2008). Depression occurs due to hormonal changes in the body, including reduction in the functions of certain transmitters such as noradrenaline, serotonin or 5-hydroxy, tryptamine, dopamine, glutamate, and GABA (Meyers, 2000; Hasler, 2010).

Passing of time and past experiences of humans have caused people to tend to use medicinal plants as a valuable pharmaceutical resource (Forouzan, 2012; Bahmani, 2013; 2014; Gholami-Ahangaran, 2012; Asadi-Samani, 2014; 2015; Delfan, 2014; Saki, 2014), such that medical scientists are increasingly using these plants to treat diseases (Delfan, 2014; Bahmani, 2014; 2015; 2016; Rabiei, 2013; Samarghandian, 2016; Moradi, 2012; Saki, 2014; Kooti, 2014). Clearly, plants can be suitable alternatives to chemical drugs (Asadi-Samani, 2014; Jivad, 2016; Rouhi-Boroujeni, 2016; Parsaei, 2016; Mohsenzadeh, 2016; Ahmadipour, 2016; Asadbeigi, 2014; Karamati, 2014), because they cause better effects and fewer side effects than chemical drugs (Baradaran, 2013; Madihi, 2013; Akhlaghi, 2011; Nasri, 2013; 2014; 2016; Khodadadi and Rafieian-Kopaei, 2016; Parsaei, 2014; Asadi-Samani, 2016; Moradi, 2013). Regarding the necessity of producing nature and plant-based drugs effective on depression and identifying their effective compounds to produce more effective drugs, the aim of this review article is to report the native antidepressant medicinal plants of Iran.

2. MATERIALS AND METHODS

In this review article, certain databases such as Google Scholar and Scientific Information Databases were searched for relevant articles with some key words such as anxiety, medicinal plants, extract, essential oil, and Iran. Then, the selected articles were analyzed. Figure 1 illustrates how the articles were selected for analysis.

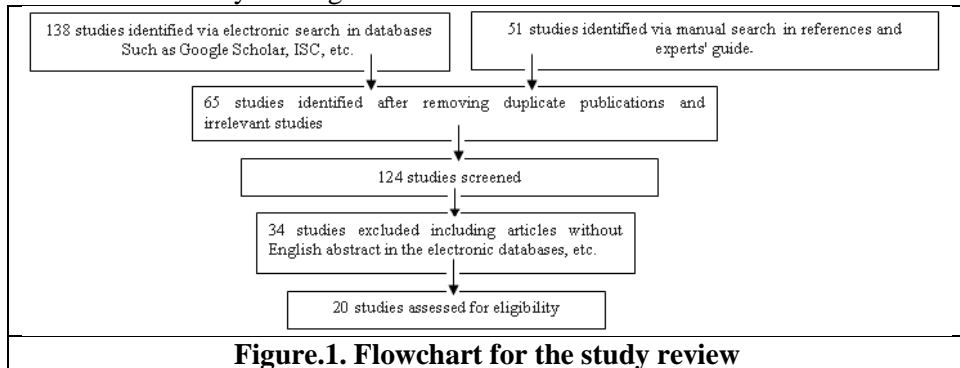


Figure.1. Flowchart for the study review

3. RESULTS AND DISCUSSION

Table.1.The most Iran's medicinal plants effective on depression

Scientific names	Family name	Persian name	Descriptions
<i>Lavandula officinalis</i>	Lamiaceae	Ostokhodous	<i>L. officinalis</i> extracts significantly decreased inactivity duration in a dose-dependent manner in both studied tests, Moreover, <i>L. officinalis</i> extracts significantly increased swimming duration in a dose-dependent manner, As with fluoxetine, <i>L. officinalis</i> exerted significant antidepressant effects (Abbasi Maleki, 2013).
<i>Scrophularia striata</i>	Scrophulariaceae	Gole meymouni	A study on male Balb/c mice indicated that 160 mg/kg of <i>S. striata</i> extract caused a significant relief of depression (Babri, 2012).
<i>Crocus sativum</i> L,	Iridaceae	Zafaran	A study on mice demonstrated that 160 and 320 mg/kg of aqueous <i>C. sativus</i> extract caused a significant increase in swimming duration. This antidepressant effect can be partially related to crocin and safranal exerting their effects through affecting dopaminergic system and inhibiting norepinephrine resorption (Hosseinzadeh, 2004).
<i>Zingiber officinale</i>	Zingiberaceae	Zanjebil	A study demonstrated that diabetized mice exhibited more severe depression-like behaviors under forced swim test, 700 mg/kg of <i>Z. officinale</i> extract caused antidepressant-like effects in these animals, Elevated glycemia may play a role in diabetes-dependent depression because <i>Z. officinale</i> extract administration improved these changes through controlling glycemia levels (Farzin, 2013).
<i>Echium amoenum</i>	Boraginaceae	Gavzaban	A study demonstrated that E, amoenum of aqueous <i>E. amoenum</i> extract caused improvement of depression in the sixth week (Saiiah bargard, 2004).
<i>Oenothera biennis</i> L,	Oenothera	Gole maghrebi	A study on humans demonstrated that administration with evening primrose essential oil caused improvement of nonpsychotic depression (Saki, 2008).
<i>Rosa canina</i> L,	Rosaceae	Nastaran maemouli	A study on laboratory NMRI white mice demonstrated that intraperitoneal and intraventricular administration of the animals with <i>R.canina</i> L,(20 and 30 mg/kg and 5 and 10 µg/mice, respectively) significantly decreased inactivity duration under forced swim test and therefore this plant extract may have antidepressant effects (Jafari, 2013).

Depression is one of the most psychiatric syndromes (64). According to the findings, *Lavandula officinalis*, *Scrophularia striata*, *Crocus sativum* L., *Zingiber officinale*, *Echium amoenum*, *Oenothera biennis* L., and *Rosa canina* L. are some of the native medicinal plants of Iran with antidepressant effects. That can be used to discover new antidepressant drugs.

4. CONCLUSION

Given the anti-depression properties of these plants which have already been confirmed by scientific investigations and their phytochemical compounds, the effective substances of the plants presented in this review article can be studied in clinical trials to investigate whether they can be used to produce nature-based, anti-depression drugs and antioxidants.

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