

# Natural Therapeutics for Common Psychiatric Disorders

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## Abstract

**Background:** According to the World Health Organization (WHO), about 500 million people in the world suffered from a mental disorder in 2002; about half of them included mild mental disorders such as depression and anxiety. Health has different physical, psychological, emotional, and social dimensions and the use of some medicinal herbs have improved brain functioning. Therefore, in this study, the most important medicinal herbs effective on common psychiatric disorders such as anxiety, stress, fatigue, insomnia, seizures, epilepsy, and memory loss have been studied.

**Methods:** In this review study, the searched keywords included Neurologic diseases, Medicinal Herbs, Traditional Medicine, Ethnobotany were searched in databases such as ISI, PubMed, Scopus, SID, Magiran.

**Results:** Based on the results, 84 medicinal herbs are used in Iran's ethnobotanics for common neurological diseases and disorders.

**Conclusion:** Knowledge of these native herbs in traditional medicine offers new and interesting ideas for modern pharmaceutical science and can help produce new and effective herbal medicines for problem-solving of psychiatric disorders.

**Key words:** Neurological diseases, Herbal medicines, Ethnobotany, Iran

## Introduction

Mental health refers to healthy thought processes and shows a positive state and mental health can contribute to creating a valuable system for mobility, development, and progress at individual, national, and international levels. When mental health is achieved it can create a path to personal and social development. According to the World Health Organization (WHO), about 500 million people in the world suffered from a psychiatric disorder in 2002, about half of which included mild psychological disorders such as depression and anxiety (1-3). Health has different physical, psychological, emotional, and social dimensions and the physical aspects of health can be easily understood. Physical health indicates the function of the whole body when all bodily organs function normally. Many factors affect health; the most important of which include heredity, environment, lifestyle, economic and social status, health services, etc. (4-5). Neuropsychiatric health is one of the important issues that attracts the attention of many specialists in different fields, due to the association and the effect of mental health on various human functions. Anxiety, stress, depression, seizure, epilepsy, insomnia and other neuropsychiatric disorders are becoming increasingly widespread and cause abnormal functioning and discomfort as well as pain and suffering of individuals (6-14). Weak nerves, stress, anxiety, anger, insomnia, and other disorders can be treated by traditional medicines and medicinal herbs. Some medicinal herbs have been shown to cause better functioning of the brain and the best drugs are often obtained from herbs. Therefore, in this article, the most important medicinal herbs effective on common psychiatric disorders, such as anxiety, stress, fatigue, insomnia, seizure, epilepsy, and memory loss were reviewed.

## Methodology

This review study was conducted by searching the keywords of nerves, mental disorder, remedy, medicinal plants, herbal plants, ethnobotany, and phytotherapy. Searching was done on databases including ISI Web of Science, PubMed, PubMed Central, Scopus, ISC, SID, Magiran and others.

## Results

According to the obtained results, 84 effective medicinal plants were identified with properties for treatment of nerves and mental disorders based on ethnobotany and ethnopharmacological documents of Iran. The most important effective medicinal plants on nerves and mental disorders in Iran are shown in Table 1 (next page).

## Discussion

Psychiatric disorders can happen at any age and for any reason. Psychiatric disorders are very diverse, but some of the disorders are more prevalent, such as insomnia, anxiety, stress, nerves, seizures, and epilepsy. The causes of these problems are also diverse. Various approaches have been searched, employed or recommended for these diseases (34-39). Use of medicinal plants is one of these approaches which has become very popular recently (40-43). Based on the results of this study, various medicinal herbs in Iran's have been used or tested in the treatment of psychiatric disorders as a drug source with less complications (44).

Most of these disorders, especially the neurodegenerative diseases, are oxidative and related to free radical induced stress (40-43). It means that they are related to oxidative stress and by reduction of free radicals and oxidative stress the disease may be prevented or treated. Medicinal plants presented in this article mostly have antioxidant activity. Hence, their effects might, in part, be attributed to their antioxidant activities. It should be noted that antioxidant activity is just one part of their effects. Plants have various components and they may act through one or more of these components all of which should be identified by preclinical and clinical trials. However, antioxidant properties of these plants usually act as an adjuvant to these compounds.

From the plants which are used for neurological disorders, *Ginkgo biloba* is an exception. It has ginkgolides which have antioxidant and neuroprotective properties as well as cholinomimetic activities. These properties make it useful in most neurologic disorders, especially in neurodegenerative diseases such as Alzheimer's disease. The efficacy of ginkgolides and *Ginkgo* extract in Alzheimer's disease has been reported to be similar to the currently prescribed drugs including donepezil or tacrine. More importantly, *Ginkgo* has very low side effects. Some other plants including *Melissa officinalis* and *Salvia officinalis* also have antioxidant and cholinergic activities and memory-improving properties (45).

## Conclusion

In sum it can be concluded that native information of medicinal plants in the knowledge of traditional medicine offers new and interesting ideas for new pharmaceutical sciences and can produce new effective herbal remedies for problem solving and psychiatric disorders.

## References

1. World Health Organization. Investing in mental health. 2003. [www.who.int/mental\\_health/en/investing\\_in\\_mnh\\_final.pdf](http://www.who.int/mental_health/en/investing_in_mnh_final.pdf)
2. The world health report 2001. Mental Health: New Understanding, New Hope. Available at: [http://www.who.int/whr/2001/en/whr01\\_en.pdf](http://www.who.int/whr/2001/en/whr01_en.pdf)
3. Shamloo S. [Psychological pathology]. 2nd. Tehran: Roshd Publication. 1989; p: 54.
4. Park JA, Park K. Drsnamh. Preventive and Social Medicine, General Health Services. Translator Shogaei Tehrani, Iran: Gilan University of Medical Sciences press; 1997:8-43.
5. Diagnostic and Statistical Manual of Psychiatric Disorders, Fourth Edition, 2000, American Psychiatric Association, Translation by Mohammad Reza Nikkho and Hamayak Avavadis Yans, 2002, p. 21
6. Meister A, Bernhardt G, Christoffel V, Buschauer A. Antispasmodic activity of thymus vulgaris extract on the isolated guinea-pig trachea: discrimination between drug and ethanol effects: *Planta Med* 1999; 65(6): 512-6..
7. Goldman L, Bennett JC. Cecil textbook of medicine, Volume 1, 11st ed, W.B. Saunders Co 2000; p: 103.
8. Andrew chevalier MH. The Encyclopedia of medicinal plant. London: Dorling. Kindersley; 1996. p: 171.
9. Lanni C, Becker EL. Inhibition of neutrophil phospholipase A2 by p-bromophenylacetyl bromide, nordihydroguaiaretic acid, 5,8,11,14-eicosatetraenoic acid and quercetin. *Int Arch Allergy Appl Immunol*. 1985; 76(3): 214-7.
10. Elisabetsky E, Amador TA, Albuquerque RR, Nunes DS, Carvalho Ado C. Analgesic activity of *Psychotria colorata* (Willd. ex R. & S.) Muell. Arg. alkaloids. *J Ethnopharmacol*. 1995; 48(2):77-83.
11. Beck AT, Alford BA, Depression: Causes and treatment. Univ of Pennsylvania Press, (2009).
12. Sadock BJ, Sadock VA. Kaplan & Sadock, Synopsis of Psychiatry: Behavioural Sciences/ Clinical Psychiatry. 9th. ed. Philadelphia, Pa: Lippincott Williams & Wilkins; 2003: 579-580..
13. Neubauer DN. Pharmacologic approaches for the treatment of chronic insomnia. *Clin. Cornerstone*. 2003; 5: 16 - 27.
14. Lownestein DH. Seizure and epilepsy In: Braunwald E, Hauser SL, Fauci AS. Harrison's principle of Internal Medicine. Mc Graw Hill. USA. 2001: 2354-2368.
15. Razmjoei D, Zarei Z and Akbari M: Study of ethnobotany of some medicinal plants in Abadeh, Fars Province. *Journal of Eco-physiology of Agricultural Plants*,7(3), 222-234, 2015.

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Table 1: The most important medicinal plants on nerves and mental disorders of Iran

Scientific name	Family name	Persian name	Used organ	Province and place of use	Therapeutic effects
<i>Salvia sp</i>	Lamiaceae	Maryam goli	Petal	Abadeh shiraz (15)	Weak nerves, excessive fatigue
<i>Pistacia khinjuk</i>	Anacardiaceae	Kolkhonak	Fruit and resin	Abadeh shiraz (15)	Reinforcing the mind
<i>Achilla mellifolium</i>	Asteraceae	Boumadaran	Petal and leaf	Abadeh shiraz (15)	Epilepsy
<i>Allium sp</i>	Liliaceae	Piaz vahshi	-	Abadeh shiraz (15)	Nerve Strengthening
<i>Verbascum cheiranthifolium</i>	Scrophulariaceae	Gole mahour	Flower, root and leaf	Abadeh shiraz (15)	insomnia
<i>Sinapis sp</i>	Brassicaceae	Khardale vahshi	Seed	Abadeh shiraz (15)	Strengthening mind and memory
<i>Dianthus crinitus</i>	Caryophyllaceae	Mikhak	Seed	Abadeh shiraz (15)	Nervous incontinence
<i>Cichorium intybus</i>		Kasni	Root and leaf	Arasbaran (16)	Nervous tonic
<i>Hypericum perforatum</i>	Hypericaceae	Gole raei	Flowered flower	Arasbaran (16)	Relief of Nervous
<i>Leonurus cardiaca</i>	Labiatae	Dome shir	Aerial parts	Arasbaran (16)	Anticonvulsants
<i>Origanum vulgare</i>	Labiatae	Marzanjoush	Flowered flower	Arasbaran (16)	Nervous tonic
<i>Ballota nigra</i>	Labiatae	Anjideyeh siah	Aerial parts	Arasbaran (16)	Neurasthenia
<i>Rosa canina</i>	Rosaceae	Nastaran vahshi	Fruit and flower	Arasbaran (16)	Relaxation
<i>Asperula odorata L.</i>	Rubiaceae	Shirpanir	Aerial parts	Arasbaran (16)	Hypnotic
<i>Hyoscyamus niger</i>	Solanaceae	Bangdaneh	Leaf and seed	Arasbaran (16)	Anticonvulsants
<i>Echium italicum</i>	Boraginaceae	Gole gavzaban	Flower	Ilam (17)	Relaxation
<i>Popover dubium L.</i>	Papaveraceae	Khashkhash	Flower and leaf	Ilam (17)	Relaxation
<i>Stochys lavandulifolia</i>	Lamiaceae	Sonbolei	Flower and leaf	Ilam (17)	Relaxation
<i>Anchusa azurea</i>	Boraginaceae	Kiko	Flower and root	Toiserkan (18)	Relaxation
<i>Echium amoenum</i>	Boraginaceae	Gelga	Flower	Toiserkan (18)	Relaxation
<i>Hypericum perforatum</i>	Hypericaceae	Gole raei	Flower	Toiserkan (18)	Relaxation

<i>Nepeta crispa</i>	Lamiaceae	Mafra	Aerial parts	Toiserkan (18)	Relaxation
<i>Pistacia khinjuk</i> Stocks	Anacardiaceae	Khinjouk	Fruit	Khopar kerman (19)	Memory Improvement
<i>Ferula assa-foetida</i> L.	Apiaceae	Anghozeh	Root and resin	Khuzistan (20)	Seizure
<i>Ferula gumosa</i> Boiss.	Apiaceae	Barijeh	Resin	Khuzistan (20)	Seizure
<i>Heracleum persicum</i>	Apiaceae	Golpar	Leaf and fruit	Khuzistan (20)	Sedative
<i>Kelussia odoratissima</i>	Apiaceae	Karafse kouhi	Aerial parts	Khuzistan (20)	Sedative
<i>Pimpinella anisum</i>	Apiaceae	Anison	Fruit	Khuzistan (20)	Sedative
<i>Trachyspermum copticum</i> L.	Apiaceae	Zenian	Fruit and seed	Khuzistan (20)	Sedative
<i>Angelica archangelica</i> L.	Apiaceae	Babouneh	Flower and leaf	Khuzistan (20)	Seizure
<i>Centurea depressa</i>	Asteraceae	Gole gandom	Stem	Khuzistan (20)	Sedative
<i>Lactuca virosa</i> Habl	Asteraceae	Kahouye vahshi	Aerial parts	Khuzistan (20)	Sedative
<i>Taraxacum officinale</i>	Asteraceae	Gole ghasedak	Aerial parts	Khuzistan (20)	Sedative
<i>Brassica napus</i>	Brassicaceae	Shalgham	Seed and root	Khuzistan (20)	Sedative
<i>Boswellia papyrifera</i>	Burseraceae	Kondor	Resin	Khuzistan (20)	Memory Improvement
<i>Spinaci oleracea</i>	Chenopodiaceae	Esfenaj	Leaf	Khuzistan (20)	Nervous tonic
<i>Avena sativa</i>	Poaceae	Jo dosar	Seed	Khuzistan (20)	Insomnia
<i>Lycopus europaeus</i>	Lamiaceae	Pagorg	Aerial parts	Dastena (21)	Nervous incontinence
<i>Pistacia atlantica</i>	Anacardiaceae	Baneh	Fruit and leaf	Dehlo kerman (22)	Nervous incontinence
<i>Carthamus oxyacantha</i>	Asteraceae	Golrang	Seed and flower	Dehlo kerman (22)	Nervous tonic
<i>Onosma stenosisiphon</i> Boiss	Boraginaceae	Houchareh	Root and leaf	Dehlo kerman (22)	Nervous tonic
<i>Onobrychis altissima</i>	Fabaceae	Esperes	Stem and flower	Dehlo kerman (22)	Nervous tonic
<i>Stachys setifera</i>	Lammiaceae	Solbeh	Essential oil ointment	Dehlo kerman (22)	Nervous tonic
<i>Ziziphora clinopodioides</i>	Lamiaceae	Avishan kouhi	Leaf and flower	Dehlo kerman (22)	Nervous tonic
<i>Hymenocrater elegans</i>	Lamiaceae	Shenouk	Flower and leaf	Dehlo kerman (22)	Nervous tonic

<i>Perovskia abrotanoides</i>	Lamiaceae	Housh	Aerial parts	Dehlo kerman (22)	Sedative
<i>Stachys lavandulifolia</i>	Lamiaceae	Toklicheh	Flower	Dehlo kerman (22)	Nervous tonic
<i>Cannabis sativa</i>	Cannabaceae	Shahdaneh	Leaf	Sirjan kerman (23)	Nervous tonic
<i>Dianthus crinitus</i>	Caryophyllaceae	Mikhak kourki	Seed	Sirjan kerman (23)	Nervous incontinence
<i>Echium amoenum</i>	Boraginaceae	Gole gavzaban	Flower	Sirjan kerman (23)	Sedative
<i>Myrtus communis</i>	Myrtaceae	Mourd	Leaf and fruit	Sirjan kerman (23)	Sedative
<i>Avena sativa</i>	Poaceae	Jo dosar	Flower	Sistan (24)	Nervous tonic
<i>Foeniculum vulgare</i>	Apiaceae	Razianeh	Seed	Sistan (24)	Nervous tonic
<i>Cichorium intybus</i>	Asteraceae	Kasni	Stem and leaf	Northeast of Persian Gulf (25)	Sedative
<i>Heliantus annus</i>	Asteraceae	Aftabgardan	Seed and flower	Northeast of Persian Gulf (25)	Nervous tonic
<i>Araucaria hispanica</i>	Brassicaceae	Manabi	Aerial parts	Northeast of Persian Gulf (25)	Nervous tonic
<i>Ixilirion tataricum</i>	Ixiliaceae	Khiarak	Inflorescence	Northeast of Persian Gulf (25)	Nervous tonic
<i>Pistacia khinjuk</i> Stocks	Anacardiaceae	Peste kouhi	Fruit	Fasa (26)	Reinforcing the mind
<i>Phoenixdactylifera</i> L.		Nakhl	Fruit	Fasa (26)	Strengthen mental health
<i>Avenasativa</i>	Gramineaceae	Youlaf	Fruit	Fasa (26)	Reinforcing the mind
<i>Rosadamascena</i>	Rosaceae	Gole mohammadi	Flower and fruit	Fasa (26)	Nervous tonic
<i>Salixaeegyptica</i>	salicaceae	Bidmeshk	Flower	Fasa (26)	Sedative
<i>Datura stramonium</i>	Solanaceae	Tatoureh	Flower	Fasa (26)	Anticonvulsants
<i>Anethum graveolens</i>	Apiaceae	Shevid	Leaf	Kazeroun (27)	Anticonvulsants
<i>Achillea tenuifolia</i> Lam	Asteraceae	Boumadaran	-	Kazeroun (27)	Nervous tonic
<i>Lycopus europaeus</i>	Lamiaceae	Payegorg	-	Kazeroun (27)	Nervous incontinence
<i>Avena wiestii</i>	Poaceae	Youlaf	-	Kazeroun (27)	Nerve fatigue
<i>Leontice leontopetalum</i>	Podophyllaceae	Alafe shakhi	-	Kazeroun (27)	Epilepsy
<i>Trifolium stellatum</i>	Fabaceae	Soureh	Flower	Kohgiluyeh (28)	Sedative
<i>Ziziphus jujube</i>	Rhamnaceae	Anab	Fruit	Mobarake (29)	Sedative
<i>Rosa damascena</i>	Rosaceae	Gole mohammadi	Flower	Mobarake (29)	Sedative
<i>Ocimum basilicum</i>	Lamiaceae	Reyhan	Leaf	Mobarake (29)	Sedative
<i>Calendula persica</i>	Asteraceae	Gole gazan	Flower	Mobarake (29)	Sedative

	Boraginaceae	Gole gazan	Flower	Marave tapeh (30)	Nervous tonic
<i>Echium amoenum</i>					
<i>Levisticum officinale</i>	Apiaceae	Angdaneye	Fruit	Mashhad (31)	Neurological diseases
<i>Artemisia vulgaris</i>	Asteraceae	Berenjasef	Flower	Mashhad (31)	Nervous tonic
<i>Coccinia macranthera</i>	Boraginaceae	Gavzaban	Aerial parts	Mashhad (31)	Sedative
<i>Eruca sativa</i>	Brassicaceae	Mandab	Seed	Mashhad (31)	Nervous tonic
<i>Nardostachys jatamansi</i>	Caprifoliaceae	Sonbolo teilb	Root	Mashhad (31)	Nervous tonic
<i>Nepeta binaloudensis</i>	Lamiaceae	Ostokhodous	Aerial parts	Mashhad (31)	Nervous tonic
<i>Stachys lavandulifolia</i>	Lamiaceae	Chaye kouhi	Flower	Mashhad (31)	Nervous tonic
<i>Tilia cordata</i>	Malvaceae	Zirfan	Leaf and fruit	Mashhad (31)	Nervous tonic
<i>Eremostachys laevigata</i>	Lamiaceae	Sonbole biabani	Flower and leaf	Natanz kashan (32)	Nervous tonic
<i>Withania coagulans</i>	Solanaceae	Khasht	Fruit and seed	Hormozgan (33)	Sedative

16. Zolfeghari E, Adeli I, Mozafarian V, Babaiy S and Habibi Bibalan GH: Identification of Arasbaran medicinal plants and ethnobotanical study of rural people knowledge (Case Study: Arasbaran forest, Mardanaghom watershed). *Iranian Journal of Medicinal and Aromatic Plants*, 28(3), 534-550, 2012.

17. Ghasemi Pirbalouti A, Momeni M and Bahmani M: Ethnobotanical study of medicinal plants used by Kurd tribe in Dehloran and Abdanan districts, Ilam province, Iran. *Afr J Tradit Complement Altern Med*, 10(2), 368-385, 2013.

18. Mosaddegh M, Esmaeili S, Hassanpour A, Malekmohammadi M, Naghibi F: Ethnobotanical study in the highland of Alvand and Tuyserkan, Iran. *Research Journal of Pharmacognosy (RJP)*, 3(1), 7-17, 2016.

19. Shariffar F, MoharamKhani MR, Moattar F, Babakhanloo P, Khodami M: Ethnobotanical study of medicinal plants of Joopar mountains of Kerman province, Iran. *Kerman Uni Med Sci J*, 21(1), 37-51, 2012.

20. Khodayari H, Amani SH, Amiri H: Ethnobotanical study of North east of Khuzistan province. *Med Plants Ecophytochemistry J*, 8, 2(4), 12-26, 2013.

21. Mohammadi H, Sajjadi SE, Noroozi M, Mirhosseini M: Collection and assessment of traditional medicinal plants used by the indigenous people of Dastena in Iran. *J HerbMed Pharmacol*, 5(2), 54-60, 2016.

22. Vakili Shahrabaki SMA: The Ethnobotanical Study of Medicinal Plants in (Dehe-lolo-vameghabadbidoieh) Village. Kerman, Iran. *Journal of Medicinal Plants and By-products*, 1, 105-111, 2016.

23. Shariffar F, Koohpayeh A, Motaghi MM, AmirKhosravi A, Puormohseni Nasab E, Khodashenas M: Study the ethnobotany of medicinal plants in Sirjan, Kerman province, Iran. *J Herb drugs*, 1(3), 19-28, 2010.

24. Iranmanesh M, Najafi SH, Yosefi M: Studies on Ethnobotany of important medicinal plants in Sistan. *J Herbal Drugs*, 1(2), 58-65, 2010.

25. Dolatkahi M, Nabipour I. An Ethanobotanic Study of Medicinal Plants in the Northeast Basin of the Persian Gulf. *Journal of Medicinal Plants* 2014; 50; 13(2): 129-143.

26. Ramezani M and Minaeifar AA. Ethanobotane Study of Fasa Medicinal Plants. *Journal of Traditional Medicine of Islam and Iran* 2016; 7(2): 221-231.

27. Amiri MS, Joharchi MR: Ethnobotanical investigation of traditional medicinal plants commercialized in the markets of Mashhad, Iran. *Avicenna Journal of Phytomedicine*, 3(3), 254-271, 2013.

28. Mosaddegha M, Naghibia F, Moazzenia H, Pirania A, Esmaeilia S: Ethnobotanical survey of herbal remedies traditionally used in Kohghiluyeh va Boyer Ahmad province of Iran. *Journal of Ethnopharmacology*, 141, 80-95, 2012.

29. Mardanonejaz SH, Janghorban M, Vazirpour M. Collection and identification of medicinal plants used by the indigenous people of Mobarakeh (Isfahan), southwestern Iran. *Journal of Herbal Drugs*, Vol. 4, No.1: 23-32, 2013

30. Mirdeilami SZ, Barani H, Mazandarani M, Heshmati GHA. Ethnopharmacological Survey of Medicinal Plants in Maraveh Tappeh Region, North of Iran. *Iranian Journal of Plant Physiology* 2(1), 327-338.

31. Amiri MS, Joharchi MR: Ethnobotanical investigation of traditional medicinal plants commercialized in the markets of Mashhad, Iran. *Avicenna Journal of Phytomedicine*, 3(3), 254-271, 2013.

32. Sajadi SE, batouli H and Ghanbari A: Collection and evaluation of the traditional selection of medicinal plants in Kashan. *Journal of Traditional Medicine of Islam and Iran* ,2(1), 29-36, 2011.
33. Safa O, Soltanipoor MA, Rastegar S, Kazemi M, Nourbakhsh Dehkordi KH, Ghannadi A: An ethnobotanical survey on Hormozgan province, Iran. *Avicenna Journal of Phytomedicine*, 3(1): 64-81, 2013.
34. Dehkordi KS, Nikfarjam M, Sanaei S. Effectiveness of mindfulness-based stress reduction training and drug therapy on quality of life in patients with irritable bowel syndrome in Shahrekord. *Life Science Journal*. 2014;11(9):445-9.
35. Solati K, Mousavi M. The Efficacy of Mindfulness-Based Cognitive Therapy on General Health in Patients with Systemic Lupus Erythematosus: A Randomized Controlled Trial. *Journal of Kerman University of Medical Sciences*. 2015;22(5):499-509.
36. Hasanpour-Dehkordi A, Fatehi D, Solati K. Analgesic plus prayer versus analgesic alone. Effect of prayer on intensity of postoperative pain, anxiety and physiological indices in surgical patients. A randomized clinical trial. *Heroin Addiction and Related Clinical Problems*. 2016;18(6):13-20.
37. Hasanpour-Dehkordi A, Jivad N, Solati K. Effects of Yoga on Physiological Indices, Anxiety and Social Functioning in Multiple Sclerosis Patients: A Randomized Trial. *Journal of clinical and diagnostic research : JCDR*. 2016;10(6):VC01-VC5.
38. Hasanpour-Dehkordi A, Solati K. The Efficacy of Three Learning Methods Collaborative, Context-Based Learning and Traditional, on Learning, Attitude and Behaviour of Undergraduate Nursing Students: Integrating Theory and Practice. *Journal of clinical and diagnostic research : JCDR*. 2016;10(4):Vc01-vc4.
39. Hosseinpour M, Deris F, Solati-Dehkordi K, Heidari-Soreshjani S, Karimi N, Teimori H. The Effect of Consanguineous Marriage on Mental Health among the Students of the Shahrekord University of Medical Sciences. *Journal of clinical and diagnostic research : JCDR*. 2016;10(11):Gc01-gc4.
40. Rabiei Z, Gholami M, Rafieian-Kopaei M. Antidepressant effects of *Mentha pulegium* in mice. *Bangl J Pharmacol*. 2016;11(3):711-5.
41. Bahmani M, Sarrafchi A, Shirzad H, Rafieian-Kopaei M. Autism: Pathophysiology and promising herbal remedies. *Current pharmaceutical design*. 2016;22(3):277-85.
42. Rabiei Z, Naderi S, Rafieian-Kopaei M. Study of antidepressant effects of grape seed oil in male mice using tail suspension and forced swim tests. *Bangl J Pharmacol*. 2017;12(4):397-402.
43. Sarrafchi A, Bahmani M, Shirzad H, Rafieian-Kopaei M. Oxidative Stress and Parkinson's Disease: New Hopes in Treatment with Herbal Antioxidants. *Current Pharmaceutical Design*. 2016;22(2):238-46.
44. Rabiei Z, Bigdeli MR, Lorigooini Z. A review of medicinal herbs with antioxidant properties in the treatment of cerebral ischemia and reperfusion. *Journal of Babol University of Medical Sciences*. 2015;17(12):47-56.
45. Elaine KP, Anne TP, Wei WW, Peter JH, Nicolette SL. Medicinal Plants and Alzheimer's Disease: from Ethnobotany to Phytotherapy. *Journal of Pharmacy and Pharmacology*, 1999; 51(5): 527-534