

Aromatherapy: A holistic healing treatment through flowers– A review

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ABSTRACT

Aromatherapy employs aromatic essential oils for medicinal purposes, aiming to enhance the overall health of the body, mind, and spirit by addressing both physical and emotional well-being. This review delves into existing literature, exploring the therapeutic, medical, cosmetic, psychological, olfactory, and massage aspects of aromatherapy, as well as safety considerations and the diverse range of plants used in this practice. Various administration methods, such as inhalation, massage, or topical applications in small quantities, are employed, with internal consumption being rare. Fundamental to aromatherapy are the practices of inhaling and externally applying essential oils to achieve mental and physical balance. The olfactory nerves, connecting the nose to the brain, serve as the primary site of action for these oils. In contemporary trends, aromatherapy is increasingly utilized in cancer treatment, post-operative pain reduction in pregnant women undergoing caesarean procedures, anxiety alleviation, improved sleep quality for burn injury and dental patients, and addressing sleep disorders. The inherent organic nature of these essential oils, coupled with their ability to synergize with the body, imparts a sense of well-beingness. As the therapeutic landscape expands, it is essential to acknowledge aromatherapy as a complementary approach, promoting holistic health and augmenting conventional medical interventions.

Key words: Aromatherapy, Essential oil, Flowers, Massage

INTRODUCTION

Aromatherapy, also known as essential oil therapy, is a holistic healing approach utilizing natural plant extracts to enhance overall health and well-being. It involves the medicinal use of aromatic essential oils to benefit the body, mind, and spirit, promoting both physical and emotional health. Considered a form of alternative medicine, aromatherapy harnesses the

distinctive aromas found in various plant parts, such as roots, stems, leaves, flowers, and fruits. Perfumes, essential oils, and aromas have historically conveyed religious values, living standards, and personal development, serving as adornments for individuals. Dating back at least 6000 years, ancient civilizations like Egypt, China, and India embraced aromatherapy as a popular complementary and alternative therapy. In the late 20th century and continuing into the

21st century, aromatherapy has gained widespread attention and recognition, evolving into the field of aroma science therapy. The unique flavors and aromas in plant parts result from the presence of essential oils in specialized glands. These oils comprise a mix of saturated and unsaturated hydrocarbons, alcohol, aldehydes, esters, ethers, ketones, oxides, phenols, and terpenes, creating distinct odors. Essential oils are found in pockets, reservoirs, glandular hairs, specialized cells, or intercellular spaces within plants. The release of essences from plants not only shields them from bacterial attacks but also provides a warming aura protecting them from temperature fluctuations. Aromatherapy employs various administration methods, including inhalation, massage, skin applications with carrier lotions, bathing, and compresses, all in small quantities. The integration of aromatherapy into holistic medicine has seen significant progress in recent years. Extensive research has explored its effects on the human brain and emotions, including its impact on mood, alertness, and mental stress in healthy individuals. Studies have delved into aromatherapy's influence on work ability, reaction time, and spontaneous actions through electroencephalograph patterns and functional imaging studies. The therapy has demonstrated positive outcomes in reducing pre-menstrual symptoms, postoperative pain in cesarean cases, depression in postmenopausal women, anxiety and stress in hemodialysis patients, and enhancing short-term memory. The olfactory bulb transmits signals to the limbic and hypothalamus parts of the brain, prompting the release of neurotransmitters like serotonin and endorphins, facilitating communication across nervous and body systems to bring about desired changes and a sense of relief. Calming, euphoric, and stimulating oils release serotonin, endorphins, and noradrenaline, respectively, contributing to the anticipated effects on the mind and body.

HISTORY OF AROMATHERAPY: MYTHICAL, MAGICAL AND MEDICINAL

Ancient Egyptian had great knowledge of cosmetology, ointment and aromatic oil. Cleopatra used herbal oils in her beauty regiment. Plant essence were used in mummification process. China first recorded the use of aromatic oil around 2700 BC. during the yellow emperor Huang ti's dynasty. His 'book of internal medicine' Contain the use of many aromatics still used today. Early Romans utilized many benefits of aromatic infused oil in their daily lives and even in sporting event applying perfume oil lavishly on their bodies, bedding and clothes. Early Greeks adopted the knowledge of essential oil from the Egyptians. 'Hippocrates' the father of medicine documented the effect of some 300 plants. India is famously known for its healing tradition from ayurveda which date backs thousands of year and which includes using herbal infusion and essential oil.

WHAT IS ESSENTIAL OIL?

Essential oils are highly concentrated hydrophobic liquids that encapsulate the volatile aroma compounds derived from plants. These oils, alternatively referred to as volatile oils, ethereal oils, aetherola, or simply the "oil of the plant," are extracted through various methods.

HOW DO ESSENTIAL OILS WORK?

The olfactory system encompasses all physical organs or cells associated with the sense of smell. When we breathe in through the nose, airborne molecules interact with the olfactory organs, reaching the brain almost instantly. As odor molecules journey through the nasal passages, they impact the brain by activating various receptor sites, including those in the limbic system, commonly known as the "emotional brain." The limbic system has direct connections to brain regions that regulate heart rate, blood pressure, breathing, memory, stress levels, and hormone balance. This intricate connection sheds light on why certain scents often evoke emotional responses. Armed with this understanding, we can hypothesize about the profound physiological and psychological effects that may result from inhaling essential oils (Fig. 1).

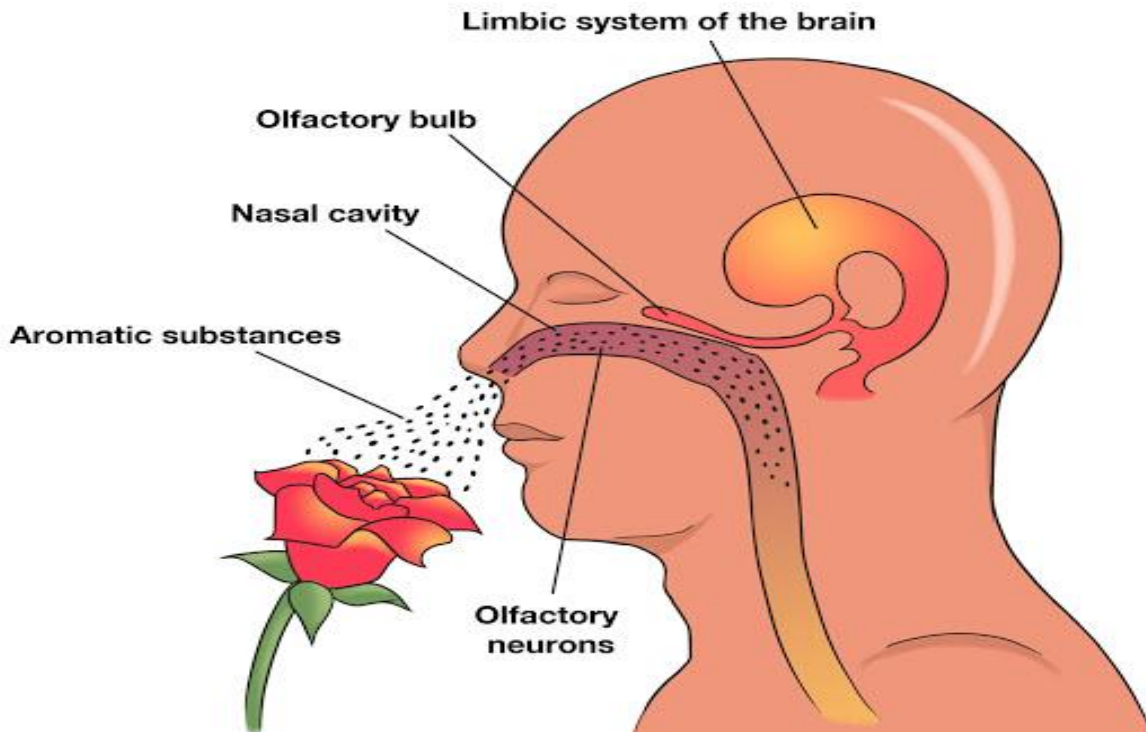


Fig. 1: Science behind aromatherapy
[Source: nuworldbotanicals.com]

FLOWER BASED ESSENTIAL OILS

Essential oil	Chemical components
Rose oil	Phenyl ethyl alcohol, nerol, geraniol, citronellol, demascenone
Jasmine oil	Benzyl acetate, indole, cis-jasmone and methyl jasmonate
Tuberose oil	Methyl benzoate, Methyl anthranilate, benzyl alcohol, butyric acid, nerol, geraniol, eugenol, farnesol
Spider lily oil	Benzyl Alcohol, Beta Myrcene, 3-Carene or Camphene or ocimene, Beta Pinene, Camphene or Limonene, Trans-Citral or Cis-Citral, Linalool Acetate, GeranylFormate, Isocapro lactone or Dihydro-3,5-Dimethyl-2-(3H)-Furanone
Marigold oil	Limonene, Tagetone, Linalool, Ocimenone
Pot marigold (Calendula) oil	Ester, Calendulin, triterpendiol ester, faradiol esters
Geranium oil	Dimethyl sulphate, ethyl alcohol, diacetylpinayl, linalool, terpineol
Lotus oil	Linalool, terpenen 4-01, 1,8 cineole, 1,4 – Dimethoxybenzene
Sage oil	Linalool, linalyl acetate
Plumeria oil	Limonene, Phynel acetaldehyde, αfarnesene
Magnolia oil	16 eudesmol, cadinol, guaiol
Champaka oil	Linalool, methyl eugenol, methyl ester
YlangYlang oil	Linalool, methyl eugenol, methyl ester
Lavender oil	Linalool, linalyl acetate, ethylphenyl acetate
Chamomile oil	pinene, camphene, b-pinene, sabinene, myrcene, y-terpinene, caryophyllene, and propyl angelate and butyl angelate.
Verbena oil	Limonene, 1,8-cineole, caryophyllene oxide, spathulenol

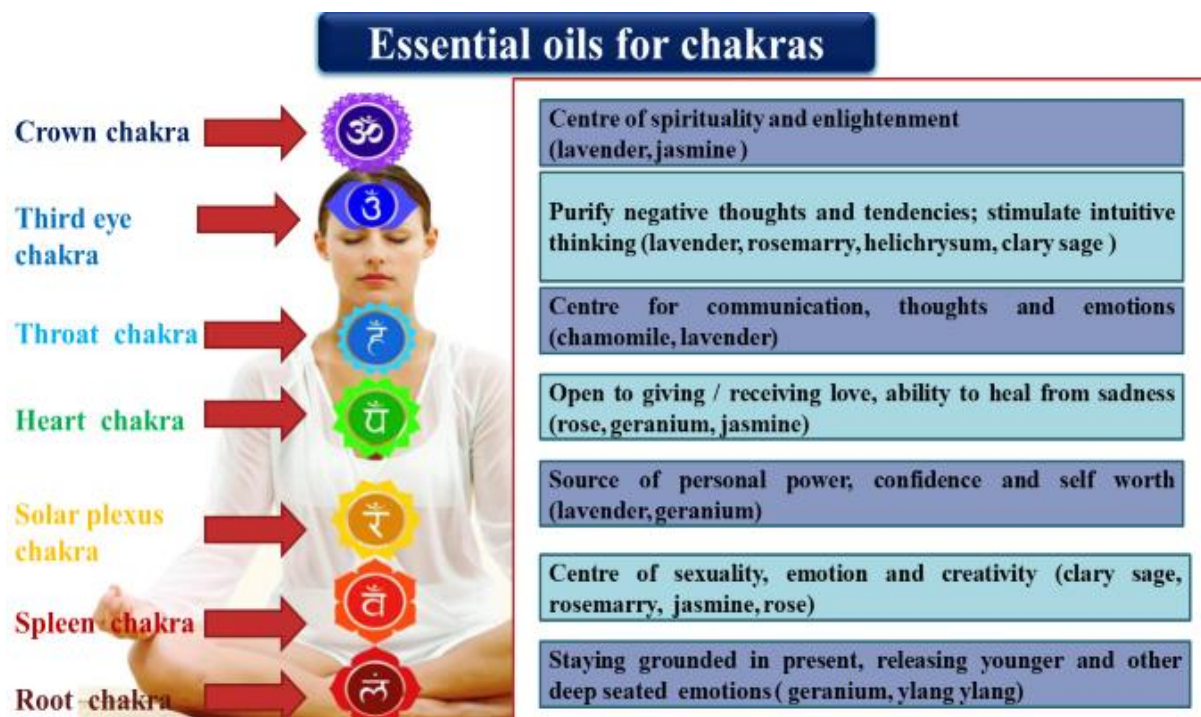


Fig. 2: Essential oil for chakras
 [Source: <https://jdebalden.com>]

❖ APPLICATION IN AROMATHERAPY

Aromatherapy derives its name from "aroma," signifying fragrance or smell, and "therapy," denoting treatment. It is centered around the use of aromatic materials, including essential oils and other aroma compounds, with purported benefits for enhancing psychological and physical well-being (Sayowan et al., 2013). Essential oils, owing to their distinctive aromas, are employed for promoting psychological and physical health through inhalation, impacting brainwaves and influencing behavior.

The olfactory properties of essential oils elicit both objective and subjective effects on cognitive performance and mood, respectively. Various plants, such as Clary sage, Eucalyptus, Geranium, Lemon, Lavender, Peppermint, Rosemary, Roman chamomile, Tea tree, and Ylang ylang, have been historically utilized in aromatherapy due to the presence of essential or volatile oils in different plant materials like flowers, bark, stems, leaves, roots, and fruits.

CLASSIFICATION OF AROMATHERAPY:

- **Cosmetic aromatherapy:** This application involves using specific essential oils in skin, body, face, and hair cosmetic products. These oils contribute to various effects, such as cleansing, moisturizing, drying, and toning, promoting healthy skin when incorporated into facial products.

- **Massage aromatherapy:** Utilizing grape seed, almond, or jojoba oil in pure vegetable oil during massages has demonstrated remarkable effects, enhancing the overall massage experience.
- **Medical aromatherapy:** Pioneered by modern aromatherapy founder Rene-Maurice Gattefosse, this category involves using essential oils to massage patients during surgery, leveraging the medicinal knowledge of essential oils for promoting and treating clinically diagnosed medical conditions.
- **Olfactory aromatherapy:** Focused on inhalation, olfactory aromatherapy enhances emotional wellness, calmness, relaxation, or rejuvenation through the pleasurable scents of essential oils. The release of stress is intertwined with the unlocking of odor memories.
- **Psycho-aromatherapy:** This category explores the emotional states achieved through essential oils, providing relaxation, invigoration, or pleasant memories. The direct inhalation of oils is the primary method, either through personal application or room infusion. Psycho-aromatherapy and aromacology both study the effects of aroma, whether natural or synthetic, with psycho-aromatherapy specifically concentrating on natural essential oils.

❖ Mode of application of aromatherapy

1. Bathing

Incorporating oils into your bath is a simple way to harness their health benefits. Just add a few drops to your bathwater, mix it in, and immerse yourself. The aroma not only enhances circulation but also contributes to achieving physical balance.



2.



Perhaps the most effective application method is through massage. Combining drops of oil with a carrier lotion can have both psychological and physiological effects on the body.

3. Vapour inhalation

Since numerous aromatic oils are believed to relieve sinus or respiratory issues, steam inhalation is a widely favored method. A general guideline for many oils is to add 5 drops to steaming water and inhale the aroma by creating a tent with a towel.



4. Lotion/creams

Add a few drops of aromatic oil to your favourite carrier lotion, massage oils or cream such as cocoa butter, shea butter or an unscented lotion base to create your own fragrant blend, to stimulate healing properties.

5. Compress

Place a few drops of your preferred oil into a bowl of warm water. Submerge a washcloth into the blend, wring it out, and use the washcloth as a compress. Apply it to the area of the body requiring pain relief, such as the stomach, forehead, or muscles.



❖ Caution for using essential oil

- Essential oils should not be used in concentrated form. As a general rule the concentration level of essential oils should be below 5 %
- Patch test before using essential oil is necessary
- While using essential oil least amount should be used, blending a few drops of essential oil with

Research study on various flower crops carrier oil

Jasmine

According to Tapanee (2010) 1 ml of 20 % (w/w) solution of jasmine oil massage for 5 minutes resulted significant increase in subjective emotional behavior *i.e.* more alertness, vigor and less relaxation as compared to control group, stimulatory effects on the function of nervous system and increased beta wave power (13 – 30 Hz) in the anterior centre as well as the left posterior region and positive emotions with respect to the feeling of well – being, active, fresh and romantic have been increased and the negative emotion like feeling drowsy was significantly decreased in participants [Sayowanet *al.* (2013)].

Lavender

Inhalation of lavender oil 10 % (v/v) significantly decreased systolic blood pressure (108.0 mmHg), diastolic blood pressure (68.52 mmHg), heart rate (65.68 bpm) and skin temperature (31.0 °C) of 20 healthy persons according to Sayorwanet *al.* (2012), 10 % lavender essence inhalation for 5 minutes reported 90 % satisfaction in caesarean post-operative pain than placebo group (50 % satisfaction) [Olapouret *al.* (2013)], decreased anxiety score with an increasing age of dental patients [Venkataramana *et al.* (2016)].

Geranium

Aromatherapy massage through 2 % geranium essential oil blending in sweet almond oil for 30 minutes found beneficial for reduction of depression symptoms in postmenopausal women [Lotfipur-Rafsanjani *et al.* (2015)] while using damask rose essential oil on depression, anxiety and stress in hemodialysis patients and reported that inhalation of damask rose oil in aromatherapy decreased the level of depression, anxiety and stress in hemodialysis patients [Dehkordiet *al.* (2017)].

Sweet Almond

According to Lotfipur-Rafsanjani *et al.* (2018), aromatherapy massage using blend of 2 % geranium essential oil and sweet almond oil decreased physical and mental symptoms of premenstrual syndrome (PMS) as compared to massage therapy and control.

Rosemary

Sulung and Aulia (2018) revealed that rosemary aromatherapy significantly improved short term memory score (26.50) than pre-treatment score (24.31) of the elderly.

Frangipani (Plumeria)

Effect of massage treatment using frangipani (Plumeria) essential oil aromatherapy for reducing the pain after childbirth. They observed that after receiving aromatherapy massage severe pain intensity (7 – 9 pain scale) was decreased from 97.14 % to 45.71 % and moderate pain intensity (4 – 6 pain scale) was increased from 2.86 % to 54.29 % which was converted from severe pain to moderate pain in women after giving child birth [Sriasihet *al.* (2019)].

Lavender + Chamomile

The effectiveness of aromatherapy massage using lavender and chamomile oil on the anxiety and sleep quality of burn patients was evaluated by Rafii *et al.* (2020). They observed

that aromatic oil massage using lavender and chamomile oil for 20 minutes significantly reduced anxiety score (42.27 ± 3.25) and improved sleep quality (8.45 ± 3.24) in patients with burn injury.

Conclusion

From the foregoing discussion it can be concluded that, aromatherapy regulates the physiological, spiritual and psychological upliftment for the new phase of life. Inhalation of lavender oil in aromatherapy helps to decrease blood pressure, heart rate and skin temperature in human. Moreover, lavender essential oil helps to reduce post-operative caesarean pain in pregnant women as well as decrease the anxiety level and improve sleep quality in patients having burn injury and dental problems. Use of jasmine essential oils in aromatherapy enhanced beta wave power in brain and thereby increased positive emotions in human. Aromatherapy with 2 % geranium oil was found effective for reduction of depression symptoms in post-menopausal as well as premenstrual syndrome in women. Depression anxiety and stress can be reduced by use of damask rose oil inhalation. Short term memory can be improved in elder person by using rosemary oil through aromatherapy. Frangipani (*Plumeria*) oil massage in aromatherapy reduced the child birth pain intensity in pregnant women. This therapy is not only preventive but also can be used in the acute and chronic stages of disease.

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