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A REVIEW ON EFFECTIVENESS OF AROMATHERAPY ON MENTAL HEALTH AND WELL-BEING

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Abstract

Aromatherapy has been used as an alternative medicine and complementary therapy, for the effective treatment of mental health and well-being. Essential oil is the main agents, which is abstracted from the flower, bark, roots, leaves or certain parts of plants which contains aromatic molecules in the cells of the plants (Steflitsch & Steflitsch, 2008). Objectives: this study aims to know the effectiveness of aromatherapy on mental health and well-being. Aromatherapy may be utilized to provide advantages through inhalation, topical application, and baths. Aromatherapy can treat depression, indigestion, headaches, sleeplessness, muscular discomfort, respiratory problems, skin illnesses, swollen joints, and urinary issues (Ali, et al, 2015). Aromatherapy can be benefited by adopting a balanced and healthy diet, as well as taking precautions recommended by health specialists and aromatherapist. This review paper is based on secondary data collected through literature searches in electronic journals and book reviews, which were analyse and assess articles from certain journals utilizing Google Scholar, PubMed, Academia, Science Direct, Web of Science, and the Library Search.

Keywords: Aromatherapy, mental health and well-being.

INTRODUCTION

One of the vital systems in our body is olfactory system, it regulates our eating selections, shape our taste and have an impact on social interaction. According to the study, one of the most potent sources of sensation is smell **(**Feng, Chen, Li, & Ding, 2019). In the past, humans connected unpleasant odors to disease, illness and fury of the god (Miller & miller, 2017). An individual has its own odor, different flowers have its own distinct smell-some are aromatic, sweet and foul or pungent, like stinky corpse lily, places like

office, house, markets, malls, classroom etc. has its own smells. A terrible fragrance instantly lifts someone's spirits and causes tension, worry, and anxiety in those who are passing by. By understanding the operations of olfactory system can help us to live healthier lives and avoid negative outcomes (Boesveldt, & Parma, 2021). The Meaning of the term 'Aroma' in Cambridge Dictionary is 'a distinctive, typically pleasant smell'. It makes a person delighted and calm.

Aromas are potent instruments that influence our feelings and actions. It is known as the "Proust Effect," after novelist Marcel Proust, who noted a strong unconsciously held association between memory recall and particular scents. In order to maintain behavior in check, enhance attention and focus, and manage the classroom atmosphere naturally and subtly, aroma therapy can be employed.

Aromatherapy Hand Massage has resulted in improving test anxiety and self-efficacy which enhanced the academic performance of nursing students (Farner, et.al., 2019). All of the researches on aromatherapy were done in healthcare settings and focused on emotions; today, it should be aimed toward education and emotional problems ranging from general to intellectual.

Aromatherapy:

Aromatherapy is a holistic treatment approach that uses natural plant extracts called essential oils to promote mental, emotional, and physical health wellness. Smell is the most important sense through which it profoundly affects the body. Techniques like distillation or cold pressing, these essential oils are extracted from a variety of plant parts, such as flowers, leaves, stems, bark, and root **(**Tanu & Harpreet, 2016). The other name of aromatherapy is essential oil therapy (Wilson, 2019). The fragrant or volatile components of plants are called essential oils (Miller & Miller, 2017). It is an art of blending fragrances for specific healing purpose and hence no training and licensing is required for aromatherapy (Suumaran & Vetrichelvan, 1963). In recent years, Aromatherapy is widely used in medicine and science all over the world for treating anxiety (Okpala, 2018).

The use of fragrant herbs for medical and cosmetic purpose is frequently attributed to the ancient Egyptians; they believed in the therapeutic qualities of various aromatic substances and employed essential oils in cosmetic and embalming procedures. Around thousands of years ago, aromatherapy was used by ancient cultures of China, India, Egypt. The earliest documented aromatherapy interventions were traced in India and China (Saini, 2016). Since almost all citrus species are believed to have originated in China and were eventually brought to Mediterranean region by the Arabs in 10^{th} century, China has made significant contribution to the history of aromatherapy, (International Federation of Aromatherapies). In India, aromatherapy was traced back 5000 years ago through the Rig Veda, which served as an encyclopedia for medicine; describing different plants and the aromas they produced (Saini, 2016).

The usage of fragrant plants was also embraced by the Greeks and Romans. The "Father of Medicine," Hippocrates, made reference to the application of aromatics in medicine. The Romans employed scented oils as fragrance in baths. Marestheus, a well- known Greek physician, recognized that certain aromatic plants had stimulating qualities and that scents of roses, fruits and spices were energizing for the weary mind **(**International Federation of Aromatherapists) (Miller & miller, 2017). In 1937, French perfumer

and chemist René-Maurice Gattefossé coined the term **"Aromatherapy"** in a book named "***Aromathérapie: Les Huiles Essentielles Hormones Végétales"*** after discovered that lavender essential oil heals burn effectively.

Italian doctors Renato Cayola and Giovani Garri conducted experiments on the psychological effects of essential oils in the 1920s and 1930s. They concentrated on the stimulating and calming effects of the oils on blood pressure, the neurological system, pulse and breathing rates, even if the antibacterial benefits were also acknowledged. Later, it was used medically to treat soldier in World War II for the first time by French surgeon Jean Valnet because of antiseptic properties of essential oils. After the World War II aromatherapy was first brought to Britain, and since, it has developed from its humble origin into a far more organized enterprise. Although beauty therapy was its primary focus at first, it has now spread to other sectors of the economy, such as hospitals, offices and complementary and alternative health institutions (International Federation of Aromatherapists).

It is obvious that essential have been used and exist from the dawn of civilization to present. One of the most popular and effective supplementary therapies available today is aromatherapy. Laboratory study confirms the medicinal advantages of essential oils. It can be only applied as complementary and alternative medicine though.

Material and Methods:

This systematic review is based on secondary data collected through literature searches in electronic journals and book reviews, which were analyse and assess articles from certain journals utilizing Google Scholar, PubMed, Academia, Science Direct, Web of Science, and the Library Search.

Results and Discussion:

Essential oils are extremely potent plant extracts that are intended to extract the aromatic chemicals found in plants. Every essential oil has a distinct aroma and along with potential medicinal qualities. Aromatherapy is non-pharmacological treatment method, is an effective alternative to conventional methods of treatment (Okpala, 2018). It is made from naturally existing aromatic molecules, essential oils have so many pharmacological and psychological qualities that they can be used in nearly every area of medicine, both for therapeutic and preventive purposes (Steflitsch & Steflitsch, 2008). When aroma of essential oil inhaled it activates limbic system of brains which controls function of the body and emotions it leads to increase in oxygen level in our body, which helps to stability in mood, peace and calmness in behavior (Michalak, 2018). Essential oils have healing, anti-bacterial, anti-inflammatory and anti-fungal properties.

Methods of Application of Aromatherapy

a) **Inhalation:** Aromatherapy frequently involves breathing in fragrance of essential oil. Diffusers, steam inhalation, and putting a few drops of oil to a bowl of hot water are few ways for doing this (Michalak, 2018).

b) **Topical application:** Some essential oils can be diluted in carrier oils and administered topically via massage or bathing. However, to prevent skin irritation, proceed to caution and follow to recommended dilution guidelines (Ernst & Cooke, 2000) (Wilkinson, 2018).

c) Impacts on mind and body:

i. Physical benefits: Some essential oils are believed to have analgesic, antibacterial and anti-inflammatory qualities. They can be applied to relieve symptoms including headaches, backaches or difficulties with breathing.

ii. Mind and emotion benefits: Since it has its ability to affect feelings and mood, aromatherapy is widely used. Certain fragrances could possess uplifting or relaxing properties that aid in promoting relaxation or lowering stress and anxiety (Dave & Yadav, 2013).

iii. Widely used Essential Oils:

a. Lavender: known for its relaxing qualities, this herb is frequently used to encourage rest and enhance sleep (Pokajewicz, et. al., 2021).

b. Peppermint: energizing could help with headache relief from headaches and mental clarity.

c. Eucalyptus: often used to relieve sinus congestion and respiratory problems.

d. Tea Tree: used to treat conditions of skin, it has antimicrobial characteristics.

e. Lemon: Lemon essential oil as a remedy for depression, fatigue, skin clearing and reduces inflammation (Boyle, 2023).

f. Rosemary: it demonstrates significant therapeutic effects on mood, memory, learning, pain, anxiety and sleep (Rahbardar, & Hosseinzadeh, 2020).

d) **Safety precautions**:

i. Since essential oils are powerful, they should be used carefully. Some could result in allergic reactions or skin discomfort **(**Ernst & Cooke, 2000).

ii. Before using any essential oils, anyone with certain medical issues, pregnant women, children under the age of 12 years, or those taking certain medications must consult with healthcare professionals.

iii. Since essential oils are light sensitive, it should be stored in dark or amber colored bottles or vials and kept away from extreme heat or cold (Miller & Miller, 2017).

Chemical and Physical Properties of Essential oils

The volatile chemicals found in different plant components are extracted and condensed into essential oil. It is constituting of alcohols, aldehydes, ethers, esters, ketones, phenols, terpenes and sesquiterpenes (Miller & miller, 2017). Depending on the plant source, growing environment, and extraction techniques, essential oils can have a wide range of chemical and physical characteristics. Here are a few typical traits:

Chemical Properties:

i. **Chemical Composition:**

The chemical components that make up essential oils include terpenes, aldehydes, ketones, ester, phenols and more. The precise make up differs amongst various essential oils.

ii. **Volatile nature:**

Since essential oils are volatile, they can quickly evaporate in to the atmosphere. They are ideal for use in aromatherapy because of these characteristics, which is essential to their fragrant characteristics.

iii. **Hydrophobic:**

Since essential oils do not mix well with water, they are typically hydrophobic. They are soluble in fats and oils due to this characteristic, but not in water. For use in solvents or carrier oils, they can be diluted for a variety of purposes.

iv. **Optical Activity:**

Chiral molecules are the reason why some essential oils have optical activity. As a result, the polarized light plane can be rotated.

v. **Specific Gravity:**

Different essential oil has different specific gravity values, which indicate how dense the oil is in relation to water.

vi. **Refractive Index:**

The amount that light is distorted as it travels through essential oils is measured by their refractive index. Essential oils are distinguished and identified by this characteristic.

Physical Properties:

1) **Color:**

There are many different colors of essential oils, ranging from clear to deep amber and even blue or green. Both the plant source and the pigments in the oil have an impact on color.

2) **Viscosity:**

Essential oils have different viscosities. There are oils that are thicker and more viscous, and there are thin oils with low viscosity. Viscosity can impact the oil's flowability.

3) **Odor:**

One of the things that make essential oils unique is their distinct smell. The particular mixture of chemical substances that are present in the oil affects fragrance.

4) **Boiling Point:**

Because essential oils are volatile, they have low boiling points. The extraction and application techniques can be affected by the boiling point.

5) **Flash Point:**

The temperature at which an essential oil will ignite when it comes into contact with an open flame or spark is known as flash point. For safety reasons, this feature is important.

6) **Solubility:**

In general, lipids and oils can dissolve essential oils. Emulsifiers and solubilizers can be used to distribute them even not dissolve completely in water.

It is critical to comprehend these chemical and physical characteristics in order to appreciate and utilize essential oils appropriately for a variety of purposes, such as aromatherapy, massage and perfumery. It also directs the choice of suitable dilution techniques and carrier oils for safe topical application. Due to the potential effects of soil, temperature, and altitude on the component, different growing regions are required for rosemary essential oils in order to achieve diverse uses (Jamshidi, et. al., 2009).

Properties of Essential oil or Aromatherapy to enhance Psychological and Physiological aspect

The use of essential oils is frequently associated with aromatherapy, a holistic approach to well-being, and has been recognized for its possible psychological impacts. Despite the responses of different individuals may differ, the following are some significant psychological impacts associated with essential oil use:

A. **Stress Reduction:** Some essential oils, such as bergamot, chamomile, and lavender have been suggested to have relaxing effects. By creating an overwhelming sense of calm and wellbeing, inhaling certain aromas may help lower stress and anxiety levels (Dave, et al., 2013).

B. **Mood enhancements:** the uplifting and energetic benefits of essential oils are frequently linked to citrus oil (lemons, orange, grape fruit) and peppermint. These aromas may help improve and enhance attention when inhaled (Dave, et al.,2013) (Koh, 2006).

C. **Anxiety Relief:** Anxiety symptoms can be alleviated by using essential oils like frankincense, lavender and rose in aromatherapy. Individuals may be capable to regulate their anxiety and stress levels attributed to the relaxing benefits **(**Gnatta, et.al.,2014) (Ukwuoma,2019) (Farner, et.al.,20019).

D. **Improve Sleep:** Relaxation and better sleep quality are often achieved using essential oils such as chamomile and lavender. This may be possible to create a relaxing environment that encourages sound sleep by inhaling these essential oils inside the bedroom or including them as part of bedtime routine

E. **Cognitive Function**: There are several essential oils which have been linked to psychological advantages, such as peppermint and rosemary. Enhanced alertness, focus and mental clarity could be improved by the aromatic aromas.

F. **Fight bacteria or fungus:** Fight bacteria, virus, or fungus: Essential oils like Citronella, cloves, mint etc. have properties like antiseptic, anti-inflammatory, astringent and fungicidal. Some oils used to treat Athlete's foot, Ringworm, Jock Itch etc. (Miller & Miller, 2019) (Tanu, et.al., 2016).

G. **Emotional Balance:** Aromatherapy is a popular method of promoting emotional health. Essential oils with harmonizing impacts on feelings such as geranium, Ylang-ylang, and clary sage may help people better control their fluctuating moods and changes in emotions.

H. **Stimulation of Creativity:** Some essential oils, like peppermint and citrus oils, are said to have mind-stirring effects, breathing this aroma may encourage creativity and sensation of freshness.

I. **Relaxation and Mindfulness:** Mindfulness practices might benefit from incorporating the use of aromatherapy. During meditation or other methods of relaxation, breathing in the fragrance of essential oils can improve the experience and provide a sense of peace and concentration.

J. **Improve hospice and palliative care:** Prolong diseases and treatment at hospital; it may cause a patient depressed and aloofness. With Aroma therapy it alleviates the depressed emotion and improves well-being (Domingos & Braga, 2014).

K. **Boost immunity:** Essential oils are mixed with carrier such as almond oils and coconut oil to prevent hair fall.

L. **Pregnant Women:** "The gentle, healing action of aromatherapy is particularly helpful during pregnancy, when it is not advisable to take medication except under the watchful eye of your doctor. Aromatherapy oils can help relieve annoying discomforts like nausea (morning sickness), swollen hands and feet, general aches and pains, and drowsiness (Sharma, 2019)."

Drawbacks of the Aromatherapy:

Despite aromatherapy can have numerous advantages, it additionally comes with certain potential drawbacks and hazards, especially if not utilized effectively (Wordwood, 2016). Lack of standardization- The efficacy of essential oils varies greatly between brands and distributors. Oils may have been contaminated or diluted, making it difficult to assure uniformity in effectiveness (Halligudi, et. al., 2013). Limitation in empirical evidences: Whereas some studies indicate that aromatherapy has positive consequences, complete and rigorous scientific study on its usefulness is typically lacking. Numerous assertions are experiential rather than being supported by clinical research (Vickers, et. al., 2000). Sensitivity issues: Certain individuals may develop allergic reactions or skin irritations when their skin comes into touch with specific essential oils. Such needs rigorous patch testing before extensive use (Wordswood, 2016).

Not an alternate for medical care. Complementary therapy: Although aromatherapy may be beneficial with specific ailments, it should not be used as a replacement for traditional medical treatments. It is frequently prescribed as a supplemental therapy rather than a primary type of treatment. Placebo Effects: Certain of the benefits associated with aromatherapy may result from the placebo effect. The psychological expectation of alleviation can exist regardless of any physiological changes caused by aromas (Wordswood, 2016). Pregnancy and Safety concerns: Certain essential oils may be unsafe to use during pregnancy because they can cause cramps or other negative effects. Women who are pregnant should contact with their healthcare physician before using aromatherapy (Sharma, 2019). Sustainability Issues: The use of essential oil extractions can at times contribute to damaging the environment, especially when plant species are

exploited in an unsustainable manner. This creates ethical considerations about the source of certain oils (Lewis, et. al., 2020).

Conclusion:

The aromatherapy used for influence mental health, emotions, uplift mood, stress as an alternative medicine and complementary therapy. Currently, it is in trend and cost-effective way to influence psychological and physiological ailment. It can be used by applying it to the skin using a carrier oil, inhaling it through diffuser and candles, or bathing.

However, it cannot used to treat chronic and acute diseases as it requires more extensive and intensive studies. While essential oils may have beneficial psychological effects, it is important to remember that individual responses could differ and that associations and personal preferences can affect how effective aromatherapy is.

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