Unisia
2022, Vol. 40, No. 2, 357-368
https://doi.org/10.20885/unisia.vol40.iss2.art6

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The Relationship between Aromatherapy and Mental Wellbeing: A Narrative Review

Baraa Almansour[1,2*]

[1]Traditional Knowledge and Innovative Approaches Project, University of Rostock, Rostock, Germany
[2]Directory of Agriculture and Agrarian Reform, Lattakia, Syria

ABSTRACT

Mental disorders are patterns of behavioral or psychological symptoms that affect multiple areas of life; these disorders create distress for the person experiencing these symptoms. The search for the most effective and safe treatments is essential. Aromatherapy as a specialized segment of phyto-therapy have attracted the attention of many researchers as complementary method for treating patients with neurological and psychiatric complaint due to their low cost and ease of use. While, it could be practiced via inhalation or topical application and massage utilizing specific essential oils for several, minor, clinical uses as a natural way of healing a person's mind, body and soul.

Keywords
aromatherapy; mental disorders; essential oils

Citation: Almansour, B. (2022). The Relationship between Aromatherapy and Mental Wellbeing: A Narrative Review. *Unisia, 40* (2), 357-368. https://doi.org/10.20885/unisia.vol40.iss2.art6

ARTICLE HISTORY
Received February 13, 2022
Revised December 19, 2022
Accepted December 21, 2022
Published December 24, 2022

Publisher's Note: Universitas Islam Indonesia stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Contact: Baraa Almansour ✉ baraaalmansour.80@gmail.com

INTRODUCTION

Mental disorders are diseases that affect cognition, emotion, and behavioral control and substantially interfere both with the ability of children to learn and with the ability of adults to function in their families, at work and in the broader society (Hyman et al., 2006). People diagnosed with mental illness achieve strength and recovery through participating in individual or group treatment (Xie, 2013). There are many different treatment options available. Complementary & alternative medicine (CAM) one of these methods. This term describes practices and products that people choose as adjuncts to or as alternatives to Western medical approaches (Debas et al., 2006).

Aromatherapy is considered as one of the complementary medical approach involves the therapeutic use of essential oils that may lead to viable options for fighting this disease, since it was proved that the healing properties of essential oils are capable not only treating physical bodies, they are known for enhancing the state of mind as well (Sayorwan et al., 2012). There are more than 180 references in history to the use of aromatic oils for mental, spiritual, and physical healing (Welsh, 1997). While, modern aromatherapy was originally developed in Germany in the 16th century, but most of its development has occurred in the current century (Robins, 1999).

Essential oils can assist in coping with the social and emotional aspects of neurological conditions (Betts, 2003; Ayaz et al., 2017; Fernandes et al., 2021) and several human trials in mental health settings indicates that there is great potential for aromatherapy effect in this area (Perry & Perry, 2006; Fung et al., 2021; Geck et al., 2020). The essential or volatile oils are extracted from the flowers, barks, stem, leaves, roots, fruits and other parts of the plant by various methods. Inhalation, local application and baths are the major methods used in aromatherapy, this type of therapy utilizes various permutation and combinations to get relief from numerous ailments (Ali et al., 2015).

This review explores the information available in the literature regarding therapeutic uses of certain aromatic oils used in aromatherapy on some mental disorders such as dementia, bipolar disorder, and depression.

METHODS

This paper employs a narrative review as its methodology. This approach is used to summarize and evaluate articles from certain scholarly periodicals. Findings from literature searches in electronic databases, manual literature searches, and canonical texts are synthesized using narrative reviews of the relevant literature

(Green et al., 2006). PubMed® is used as main database for this study. It It includes almost 35 million references to articles in biomedical publications like MEDLINE, life science journals, and electronic books. This database was consulted in the search for articles with keywords including "aromatherapy", "dementia", "bipolar disorder", and "depression". Articles were included if their abstracts discussed the possible link between aromatherapy and dementia, bipolar disorder, or depression.

RESULTS AND DISCUSSION

Dementia

Worldwide, approximately 50 million people have dementia, there are 4.6 million new-cases of dementia every year and it is suggested that this figure will double every 20 years, reaching over 80 million by 2040 (Husband & Worsley, 2006; Husband, 2008). Dementia refers to a syndrome that is characterized by progressive deterioration of cognitive functions. The neuropsychiatric symptoms include apathy, agitation, and depression. As the disorder progresses, the patient gradually becomes dependent on others to perform routine daily activities (Bansal & Parle, 2014).

Though there is no treatment currently available to cure dementia, but it was proved that aromatherapy with specific essential oils is an effective treatment in various stages of clinical trials that aromatherapy may bring about some feeling of relief and the ability to act on outside influences such that the obstacle to action in senile dementia can be coped with (Jimbo et al., 2009), and Lemon balm essential oil is considered as effective and popular oil that used in such a treatments.

Lemon balm (*Melissa officinalis* L.) belongs to *Lamiaceae* family, is a perennial bushy plant and is upright, reaching a height of about1 m. The soft, hairy leaves are 2 to 8 cm long and heart shaped. Lemon balm's small flowers are 2-lipped, grow in whorled clusters, and may be pale yellow, white, pinkish and infrequently purplish or bluish and non-glandular hairs (Moradkhani et al., 2010). It is commonly referred to as Lemon Balm because of its lemon-like flavor and fragrance (Tucker, 2000), the documented historical uses of *M. officinalis* date back to the "Materia Medica" in approximately 50–80 B.C. (Kennedy et al., 2003).

Its essential oil ranged from 0.01 to 0.25%, the main components of the essential oil are citronellal, citral (citronellol, linalool) and geranial. In addition, this oil contains such as three terpinene, phenol carbon-acid (rosmarinic acid), and flavonglychoside acids in low ratio (Bağdat & Coşge, 2006; Pirbalouti et al., 2019; Petrisor et al., 2022).

There is a wide range of behavioral and psychological symptoms experienced by patients with severe cognitive impairment (van der Linde et al., 2010; Cerejeira et al., 2012). Some research suggest positive effects of aromatherapy using balm oil with an

overall improvement in agitation and quality of life parameters (Ballard et al., 2002; Li et al., 2021). Other research show a cognitive group-specific effect of Lemon Balm's ability to calm anxious behavior (Watson et al., 2019).

The effectiveness of *M. officinalis* could be explained by some cholinergic activities that have been detected in its extract represented by cis- and trans-rosmarinic acid isomers and a rosmarinic acid derivative (Awad et al., 2009; Dastmalchi et al., 2009; Guginski et al., 2009). According to Shinjyo & Green (2017), rosmarinic acid is a natural compound with choline esterase inhibitory potency found lemon balm, suggesting potential efficacy in dementia intervention. Hemangkorn (2021) also found that balm oil could assist in alleviating anxiety and improve mood in people suffering from the this condition.

Bipolar disorders

The annual incidence of bipolar disorders ranges from 3 to 10 cases per 100,000 population (Bobo, 2017). Only approximately one-quarter of patients with bipolar disorders fully recover from an acute depressive episode (Sachs et al., 2007). Bipolar disorders are serious, chronic psychiatric illnesses characterized by alternating episodes of mania or hypo-mania and depression, or mixtures of manic and depressive features. Among residual symptoms, insomnia and anxiety are most commonly observed and predict a poor course of bipolar disorder (Putnins et al., 2012; Gold & Sylvia, 2016; Asarnow & Mirchandaney, 2021). These problems not only affect the mental and emotional status of the human being but also it affects the physical health by affecting things like sleep and general wellbeing (Brennan et al., 2022; Cheong et al., 2021; Panneerselvam, 2017).

There are many interventions to treat insomnia and anxiety, a unique one is aromatherapy. The constituents and properties presented in essential oil of Lavender has been proved to be active treatment in such cases. Lavender is a small dicotyledonous shrub of the *Lamiaceae* family, which includes 39 species (Upson & Andrews, 2004), and measures 30 to 60 cm in height, the flowers are usually tender or purplish blue in color. Its essential oil is obtained from steam distillation processing of the flowering top, while the main active ingredients are monoterpenes (linalool, linalyl acetate, lavandulol, geraniol, bornyl acetate, borneol, terpineol, and eucalyptol or lavandulyl acetate (Białoń et al., 2019).

Lavender essential oil is being employed in aromatherapy by inhalation, aromatherapy massage, dripping oil, and bathing. Lavender is excellent to treat insomnia and improve the sleep quality, and he explained Linalool has sedative effects whereas the linalyl acetate has narcotic action (Koulivand et al., 2013; Nasiri &

Fahimzade, 2017; Hamzeh et al., 2020). It has a high concentration of volatile oils, which impart its distinctive and pleasing fragrance. The relaxing experience of lavender fragrance led to its deliberate, therapeutic use in aromatherapy to relieve mild anxiety. It has a demonstrated efficacy comparable or superior to benzodiazepines and kava, with a super safety profile (Woelk & Schläfke, 2010; Appleton, 2014; Kim et al., 2021).

According to Moghadam et al. (2022), aromatherapy with inhaled lavender essential oil and breathing exercises can be considered by clinical nurses as simple, applicable, and effective interventions to reduce Electroconvulsive therapy (ECT)-related anxiety. According to Fung et al. (2021), the favorable outcomes of Lavender aromatherapy in reducing anxiety symptoms that associated with Bi-polar disorder may be due to multiple mechanisms, including the regulation of monoamine level, the induction of neurotrophic factor expression, the regulation of the endocrine system and the promotion of neurogenesis.

Depression

Depression is a common mental disorder and one of the main causes of disability worldwide. Globally, an estimated 264 million people are affected by depression, and according to the World Health Organization (WHO) it is the single largest contributor to global disability (7.5%) (World Health Organization, 2017). It is characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, tiredness, and poor concentration (James et al., 2018). The advantages of herbal treatments would include its complementary nature to the conventional treatment, thus making the latter a safer and cheaper option for depressive disorders (Dudhgaonkar et al., 2014).

Since depression is a growing problem of the modern world the use of complementary medicines is welcome in its treatment. Yim et al. (2009) claimed that aromatherapy could be used as a complementary and alternative therapy for patients with depression and secondary depressive symptoms arising from various types of chronic medical conditions. Other research also indicate the effectiveness of aromatherapy for patients with depressive symptoms (Sánchez-Vidaña et al., 2017; Liu et al., 2022).

Rosa Damascena mill L. commonly known as Damask rose belong to *Rosaceae* family. It has been referred to as the king of flowers (Cai et al., 2005). It is a perennial bushy shrub reaching approximately 1 to 2 meters in height with large, showy, and colorful flowers. The leaves are imparipinnate and compound with 5-7 leaflets (Boskabady et al., 2011). Damask rose essential oil is prepared by hydro distillation,

with percentage varied between (0.032% and 0.040%), and its major constitutes are geraniol, nerol, and phenylethyl alcohol (Baydar & Baydar, 2005). *Rosa damascena* (*Rosaceae*) has been found to act on central nervous system including the brain. Dehkordi et al. (2017) declared that inhalation aromatherapy using the damask rose oil can decrease depression, anxiety, and stress in hemodialysis patients.

Other study has been conducted regarding Postpartum depression (PPD) which is one of the most common problems in women of childbearing age. Kianpour et al. (2018) evaluated the efficacy of aromatherapy on PPD. The intervention lasted from 38th week of pregnancy until 6 weeks after delivery. Then depression level was determined before the intervention, 35–37 weeks of pregnancy, 2 and 6 weeks after delivery using Edinburgh questionnaire. This study provides valid evidence for the effect of aromatherapy on PPD. Therefore, the use of aromatherapy can be recommended in high-risk women. Also, anxiety and depression are among the initial disorders in end stage renal disease patients. On the other hand, dialysis itself is a process causing stress and anxiety followed by several psychological problems. Dehkordi et al. (2017) found that inhalation aromatherapy using the damask rose oil can decrease depression, anxiety, and stress in hemodialysis patients.

CONCLUSION

Mental disorders, in particular their consequences and their treatment, are of more concern and receive more attention now than in the past. Because of suffering and accounts for a higher proportion of those disabled by these disorders, also because of increased awareness of the importance of mental wellbeing. Aromatherapy has been proved to be active natural therapy on mental health by stimulating the parasympathetic system. Thus, its practicing could potentially serve as effective and safe treatments for different mental disorders.

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