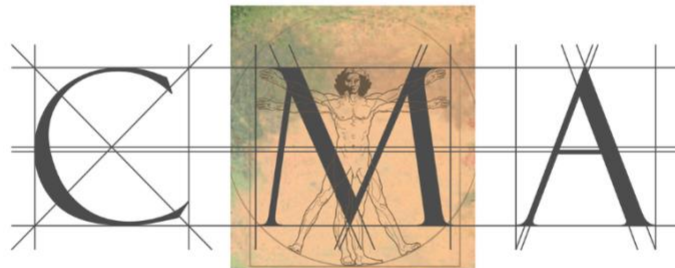


Aromatherapy Awareness Week

Celebrating the
art and science of aromatherapy
with



Complementary Medical Association



Aromatherapy Awareness Week

In recognition of Aromatherapy Awareness Week, we have scoured the research journals to bring you the latest studies on essential oils and their use in aromatherapy. It is often stated (by ill-informed – or ‘agenda-informed’ skeptics) that “there’s no research in complementary medicine” – they essentially claim that it’s all ‘woo-woo’! However, as our better-educated readers know, nothing could be further from the truth – and, the evidence-base across the field continues to grow apace.

We are delighted to present to you eight recently published studies that we hope you will find fascinating and informative. We also hope that these studies serve to illustrate the sophistication of research in the field – and the enormous therapeutic scope and power of aromatherapy as a safe and effective therapeutic intervention.



Please let us know whether you have enjoyed this research update and whether you'd like to see more research-related content of this type for other complementary medical disciplines. Furthermore, we hope that these few studies will whet your appetite for further research. If research is new for you, you might like to view our tutorial on The Complementary Medical Association's YouTube channel where we ask The CMA's Science and Research Director, Dr Frank Sabatino, to "[Bust the Myths around Research in Complementary Medicine](#)". This helpful video really has some extremely useful insights on how to begin research in our highly specialised field – it is also a great refresher if you are already a seasoned researcher.

Our warmest wishes to you and gratitude for all you do!

Jayney Goddard and The CMA Team

(Note: we have defaulted to using British English spellings throughout this e-book – we hope that this doesn't cause too much consternation among our friends outside the UK.)

Unveiling the Therapeutic Potential of Aromatic Plant Extracts in Alzheimer's Disease

Introduction:

Alzheimer's disease is a complex and devastating neurodegenerative condition that affects millions of individuals worldwide. As researchers continue to explore potential treatments, an exciting new study has emerged, shedding light on the therapeutic potential of aromatic plant extracts for the treatment of Alzheimer's disease – and its devastating symptoms. In this comprehensive review, published in *CNS Neuroscience & Therapeutics*, the researchers delve into the underlying mechanisms that make these extracts promising candidates for future interventions. Let's dive into the details and discover how these natural compounds may hold the key to fighting Alzheimer's.



The Study:

A team of researchers conducted a comprehensive review, examining the therapeutic potential of aromatic plant extracts in Alzheimer's disease. The study analysed existing scientific literature and compiled data from numerous studies to provide a comprehensive overview of the underlying mechanisms and effects of these extracts. The research team scrutinized various aromatic plant extracts, exploring their potential in preventing or slowing down the progression of Alzheimer's disease.

Key Findings:

The study's findings revealed several intriguing mechanisms by which aromatic plant extracts may benefit individuals with Alzheimer's disease. Here are the key takeaways:

1. **Anti-inflammatory and Antioxidant Effects:** Many aromatic plant extracts demonstrated potent anti-inflammatory and antioxidant properties. Chronic inflammation and oxidative stress play significant roles in Alzheimer's disease progression, and by targeting these processes, these extracts may help protect brain cells from damage.
2. **Neuroprotective Effects:** Several aromatic plant extracts exhibited neuroprotective effects, which means they can shield neurons from degeneration and promote their survival. This could potentially slow down the cognitive decline seen in Alzheimer's disease.
3. **Anti-Amyloid and Anti-Tau Activities:** Alzheimer's disease is characterized by the accumulation of abnormal proteins, namely amyloid-beta plaques and tau tangles. Some aromatic plant extracts have shown the ability to inhibit the formation and deposition of these toxic protein aggregates, potentially reducing their detrimental effects on brain function.
4. **Cognitive Enhancement:** Aromatic plant extracts have also been found to enhance cognitive function in various models of Alzheimer's disease. These extracts may improve memory, learning, and overall cognitive performance, offering hope for potential therapeutic interventions.

A deeper dive into the results - and the oils used in the studies analysed:

Patients diagnosed with Alzheimer's disease (AD) commonly experience age-related cognitive decline, along with disturbances in sleep patterns, anxiety, and agitation. These symptoms tend to worsen as patients age and as the dementia progresses. Emerging clinical research indicates

the potential of aromatherapy as an effective intervention for managing cognitive dysfunction and agitation in AD patients.

A recent study involving 28 older adults, 17 of whom had AD, explored the use of aromatherapy for a duration of 28 days. The treatment involved the administration of rose and lemon essential oil (LEO) in the morning, and lavender and orange essential oil in the evening. Following the treatment, all patients reported significant improvements in their cognitive abilities, as measured by the Gott fries, Brane, Steen Scale, and the Type Dementia Assessment Scale, both of which are validated assessment tools in Japan.¹

Lavender essential oil, known for its ease of application and minimal side effects, has been found to significantly reduce non-aggressive physical behaviors in residential patients with dementia.²

Another study conducted a randomized clinical trial over a period of 3 months, using a 2% lavender essential oil for therapeutic massage on selected acupuncture points in 60 AD patients. The results showed a reduction in the severity and distress associated with behavioral and psychological dementia symptoms.³

Additionally, research investigating the effects of olfactory neurostimulation demonstrated that the scent of cedar significantly improved scores on the ²Neuropsychiatric Inventory (NPI) and Zarit Caregiver Burden Interview (J-ZBI) in AD patients without olfactory dysfunction. This improvement was observed after 4 and 8 weeks of exposure to the cedar scent.⁴

In a double-blind placebo-controlled study involving AD patients with severe dementia, melissa essential oil therapy was applied twice daily to the patients' faces and arms for a period of 4 weeks. The results indicated a 30% reduction in patients' scores on the Cohen-Mansfield Agitation Scale (CMAI), as well as an overall improvement in agitation and quality of life parameters.⁵

These findings highlight the potential benefits of aromatherapy, particularly with essential oils such as lavender, cedar, rose, lemon, and melissa, in managing cognitive dysfunction and agitation in patients with AD. Further research is warranted to explore the underlying mechanisms and to develop comprehensive guidelines for the use of aromatherapy in clinical practice.¹⁻⁵

CMA Expert Insights:

The exploration of aromatic plant extracts in Alzheimer's research is exciting. These natural compounds offer a unique opportunity to target multiple pathological processes simultaneously. While further research is needed, their potential to provide multifaceted therapeutic benefits makes them promising candidates for future drug development.

Aromatic plant extracts can offer complementary support to existing Alzheimer's treatments. It's crucial to consult with healthcare professionals before incorporating these extracts into a treatment plan, as they can interact with other medications.

Implications and Future Directions:

While this comprehensive review highlights the therapeutic potential of aromatic plant extracts in Alzheimer's disease, it's important to note that more research is needed before these extracts can be recommended as a standard treatment. The current findings, however, pave the way for further investigations and potential clinical trials.

Conclusion:

The comprehensive review on aromatic plant extracts in Alzheimer's disease provides a compelling glimpse into the potential therapeutic benefits of these natural compounds. With their anti-inflammatory, antioxidant, neuroprotective, and cognitive-enhancing properties, these extracts may offer hope for future interventions. As researchers continue to unravel the mechanisms and conduct further studies, we inch closer to a future where nature's gifts may play a crucial role in the fight against Alzheimer's disease.

References:

1-5) <https://onlinelibrary.wiley.com/doi/10.1111/cns.14234#cns14234-bib-0010>

Source:

Ma Y, Li Y, Yin R, Guo P, Lei N, Li G, Xiong L, Xie Y. Therapeutic potential of aromatic plant extracts in Alzheimer's disease: Comprehensive review of their underlying mechanisms. *CNS Neurosci Ther*. 2023 Apr 30. doi: 10.1111/cns.14234. Epub ahead of print. PMID: 37122144.

The Power of Topical Essential Oils in Relieving Musculoskeletal Disorders

Introduction: Musculoskeletal disorders (MSDs) are a prevalent group of conditions affecting the muscles, bones, tendons, ligaments, and other supporting structures of the body. They encompass a wide range of ailments, such as osteoarthritis, rheumatoid arthritis, tendinitis, and sprains. Treatment options for MSDs vary, with topical therapies being a popular choice due to their ease of use and localized effects. In recent years, there has been growing interest in the use of essential oils (EOs) as add-on therapies for managing MSDs. Let's explore the effectiveness of topical essential oils and delve into the findings of a systematic review and meta-analysis of randomized controlled trials.

Understanding Topical Treatments for MSDs:

Topical treatments are applied directly to the skin, targeting the affected area of the musculoskeletal system. They come in various forms, such as gels, creams, lotions, and ointments. These formulations typically contain active ingredients like nonsteroidal anti-inflammatory drugs (NSAIDs), capsaicin, salicylates, or counterirritants, which provide temporary pain relief and reduce inflammation.

Essential Oils as Add-On Therapy:

Recent studies of various essential oils have examined their potential benefits in managing MSDs when applied topically. One study that sheds light on this topic is the systematic review and meta-analysis conducted by Bakó et al. in 2023, published in the journal *Pharmaceuticals*.

Key Findings of the Systematic Review:

The study reviewed a substantial number of randomized controlled trials (RCTs) involving topical essential oils for musculoskeletal disorders. The primary outcomes assessed in the meta-analysis were pain intensity reduction and improvement in physical function, while secondary outcomes included stiffness and adverse events.

The results revealed a significant reduction in pain intensity among participants who used topical essential oils compared to those who received a placebo or no intervention. Moreover, physical function was found to improve significantly in the essential oil group. Stiffness, another common symptom of MSDs, also showed improvement with the use of essential oils. Importantly, the study highlighted that adverse events associated with essential oil usage were infrequent and generally mild.

Benefits of Essential Oils in Reducing Pain and Stiffness:

Essential oils offer a multifaceted approach to managing MSDs. They possess analgesic, anti-inflammatory, and muscle relaxant properties, making them promising options for pain relief. These oils can penetrate the skin and target the underlying tissues, providing localized relief. Additionally, some essential oils have been shown to possess antioxidant properties, which may contribute to reducing inflammation and protecting against oxidative stress-related damage in the joints and muscles.

Possible Essential Oil Combinations and Tips for Daily Use:

Incorporating essential oils into daily life can be an excellent and highly effective complementary strategy to manage MSDs. It is important to note that individual responses to essential oils may vary, and it is recommended to consult with a healthcare professional before starting any new treatment. You can find a full database of qualified, insured aromatherapy professionals on The CMA website: The-CMA.org.uk



Here are a few essential oil combinations and tips to consider:

1. Lavender and Chamomile: This combination has soothing and calming effects, which can help reduce muscle tension and promote relaxation.
2. Peppermint and Eucalyptus: These oils have cooling properties that can provide a refreshing sensation and help alleviate pain and inflammation.
3. Ginger and Black Pepper: These oils possess warming properties and may help improve blood circulation and relieve muscle stiffness.
4. Dilution and Carrier Oils: Essential oils are highly concentrated and should be diluted with a carrier oil, such as coconut or jojoba oil

References:

Bakó E, Fehérvári P, Garami A, Dembrovszky F, Gunther EE, Hegyi P, Csupor D, Böszörményi A. Efficacy of Topical Essential Oils in Musculoskeletal Disorders: Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Pharmaceuticals (Basel)*. 2023 Jan 19;16(2):144. doi: 10.3390/ph16020144. PMID: 37259296.

The Power of Essential Oils: A Comprehensive Review on Their Impact on the Nervous System

Essential oils have captivated the human imagination for centuries, with their natural aromatic properties and therapeutic potential. As health professionals, we know that it is crucial to explore the scientific evidence behind the traditional use of essential oils. In this comprehensive review, published in *Molecules*, in April 2023 the research team of Sattayakhom et al. looked at

the latest research spanning the past ten years, shedding light on the effects of essential oils on the intricate workings of the nervous system.

By systematically searching MEDLINE, Scopus, and Google Scholar, they have curated approximately seventy selected studies that provide valuable insights.

The findings of these studies uncover a multitude of benefits associated with essential oils. From antistress and antianxiety effects to analgesic properties, cognitive enhancement, and



modulation of autonomic functions, essential oils demonstrate remarkable potential.

Interestingly, certain oils exhibit developmental benefits by promoting neurite outgrowth, making them particularly intriguing for neurological health.

Furthermore, the application of essential oils has been shown to modify neurotransmitter receptor levels, offering a fascinating avenue for further investigation. The physiological outcomes explored include arousal, cognitive performance, circadian eating behaviour, emotional modulation, consumer acceptance, preferences, and purchasing behaviour.

Additionally, the impact of essential oils on various pathophysiological conditions, including pain, depression, anxiety, stress, sleep disorders, mental fatigue, agitated behaviour, and overall quality of life, is thoroughly examined.



It is crucial for practitioners to have a full understanding of the promising effects of essential oils on the nervous system. This can then open doors to innovative approaches in functional foods, beverages, and complementary therapies. By staying informed and embracing evidence-based practices, we can harness the potential of essential oils to enhance patient care and well-being. This comprehensive review – which is well worth reading in its entirety - serves as a

valuable resource for health professionals seeking to leverage the power of essential oils in their practice.

References:

Sattayakhom A, Wichit S, Koomhin P. The Effects of Essential Oils on the Nervous System: A Scoping Review. *Molecules*. 2023 Apr 27;28(9):3771. doi: 10.3390/molecules28093771. PMID: 37175176; PMCID: PMC10180368.

Aromatherapy for Agitation in Dementia Patients: Promising Findings from a Quasi-Experimental Study

Introduction:

Dementia is a challenging condition that affects millions of people worldwide, with symptoms that often include agitation and restlessness. Managing these symptoms is crucial to improve the quality of life for individuals living with dementia. In recent years, complementary therapies like aromatherapy have gained attention for their potential to alleviate agitation in patients with dementia.

A new quasi-experimental study published in *Geriatric Nursing* explores the effects of aromatherapy on agitation in community-dwelling dementia patients. Let's delve into the study's findings and their implications for health professionals working with dementia patients:



Study Design and Methods:

The study, conducted by Ting YY, Tien Y, and Huang HP, aimed to evaluate the impact of aromatherapy on agitation levels in patients with dementia. The researchers employed a quasi-

experimental design, selecting 60 participants from the community who met the inclusion criteria. The participants were divided into two groups: an intervention group and a control group.

The intervention group received aromatherapy, while the control group did not receive any intervention. The researchers used the Cohen-Mansfield Agitation Inventory (CMAI) to measure agitation levels at baseline and after the intervention period. The duration of the aromatherapy intervention was eight weeks, with sessions lasting 20 minutes each. Essential oils commonly used in dementia care, such as lavender and lemon, were used for aromatherapy.

Key Findings:

The results of the study showed promising effects of aromatherapy on agitation in patients with dementia. After the eight-week intervention, the researchers found a significant reduction in agitation levels among participants in the intervention group compared to the control group.

The mean CMAI score decreased from 62.2 at baseline to 43.6 after the aromatherapy intervention in the intervention group. In contrast, the control group showed no significant change in agitation levels over the same period. These findings indicate that aromatherapy may be a valuable non-pharmacological intervention for managing agitation in community-dwelling dementia patients.

Implications for Health Professionals:

The positive outcomes of this study have important implications for health professionals working with dementia patients. Aromatherapy, as a non-invasive and non-pharmacological intervention, offers a potential complementary approach to managing agitation in these individuals. The use of essential oils in aromatherapy is relatively safe and can be easily incorporated into the existing care routines.

It is crucial for healthcare providers and caregivers to consider individual preferences, potential allergies, and sensitivities to particular scents when implementing aromatherapy. Collaborative decision-making with patients and their families is essential to ensure the choice of essential oils aligns with personal preferences and needs.

While this study provides promising results, it is important to note that further research is necessary to validate these findings and investigate the long-term effects of aromatherapy on agitation in dementia patients. Future studies should explore optimal dosages, frequency, and duration of aromatherapy sessions to enhance its efficacy in different settings.

Conclusion:

The quasi-experimental study on aromatherapy for agitation in community-dwelling dementia patients highlights the potential of this non-pharmacological intervention in managing symptoms of agitation. The positive outcomes observed in this study indicate that aromatherapy could be a valuable addition to the care strategies for dementia patients, enhancing their well-being and overall quality of life.

As healthcare professionals, it is important that we stay informed about the latest research and consider incorporating aromatherapy as a complementary intervention for managing agitation in dementia care settings.

References:

Ting YY, Tien Y, Huang HP. Effects of aromatherapy on agitation in patients with dementia in the community: A quasi-experimental study. *Geriatr Nurs*. 2023 May 4;51:422-428. doi: 10.1016/j.gerinurse.2023.04.010. Epub ahead of print. PMID: 37148590.

The Soothing Power of Chamomile Aromatherapy for Post-Cesarean Pain

Introduction:

As healthcare professionals, our ultimate goal is to provide optimal care and alleviate discomfort for our patients. A recent study published in Heliyon, titled “Effect of chamomile aromatherapy with and without oxygen on pain of women in post caesarean section with spinal anesthesia: A randomized clinical trial”, explores the potential benefits of chamomile aromatherapy in reducing pain experienced by women after caesarean section surgeries. This research sheds light on an alternative approach to pain management, which may enhance the overall well-being and recovery of postoperative patients. Let's delve into the details and implications of this exciting study.



The Study:

The study, conducted by Zamani Habibabad et al., was a randomized clinical trial involving women who underwent caesarean section surgeries with spinal anaesthesia. The researchers aimed to investigate the effect of chamomile aromatherapy, both with and without oxygen, on postoperative pain. A total of 120 participants were randomly assigned to three groups: a chamomile aromatherapy group, a chamomile aromatherapy with oxygen group, and a control

group receiving routine care without aromatherapy. The pain levels of the participants were assessed using a standard pain rating scale.

Results:

The findings of the study revealed promising results regarding the analgesic effects of chamomile aromatherapy. Both groups receiving chamomile aromatherapy demonstrated a significant reduction in postoperative pain compared to the control group. Furthermore, the addition of oxygen to the chamomile aromatherapy group resulted in an even greater pain reduction. The study suggests that chamomile aromatherapy, combined with oxygen supplementation, may offer an enhanced pain management strategy for women recovering from caesarean section surgeries.

Mechanism of Action:

Chamomile, a popular herb known for its soothing properties, contains bioactive compounds that have been shown to possess anti-inflammatory, analgesic, and muscle relaxant effects. Inhalation of chamomile essential oil, as used in the study, is thought to activate specific olfactory receptors, triggering a cascade of physiological responses that can help reduce pain and promote relaxation. Oxygen supplementation, when combined with chamomile aromatherapy, may enhance the absorption and distribution of the active compounds, amplifying the therapeutic effects.

Implications for Clinical Practice:

The findings of this study provide valuable insights for healthcare professionals, particularly those involved in postoperative care for women who have undergone caesarean section surgeries. Incorporating chamomile aromatherapy into routine pain management protocols may offer a non-invasive and natural approach to alleviate postoperative discomfort. By implementing this complementary intervention, healthcare providers can potentially reduce the reliance on analgesic medications, thereby minimizing potential side effects and improving patient satisfaction.

Limitations and Future Research:

It is important to acknowledge some limitations of the study. Firstly, the research was conducted within a specific population of women undergoing caesarean section surgeries with

spinal anaesthesia. Further investigations should explore the generalizability of these findings across different surgical procedures and patient populations. Additionally, the study did not investigate the long-term effects of chamomile aromatherapy beyond the immediate postoperative period. Future research should focus on evaluating the sustainability and durability of pain relief associated with this intervention.

Conclusion:

The study by Zamani Habibabad et al. highlights the potential of chamomile aromatherapy, in combination with oxygen supplementation, as a non-pharmacological intervention to alleviate postoperative pain in women who have undergone caesarean section surgeries. Healthcare professionals can consider incorporating this complementary therapy into their pain management strategies, promoting patient-centred care and optimizing postoperative recovery. However, further research is warranted to validate and expand upon these findings. By embracing alternative approaches like chamomile aromatherapy, we can continue to advance patient care and improve outcomes in the field of postoperative pain management.

References:

Zamani Habibabad H, Afrasiabifar A, Mansourian A, Mansourian M, Hosseini N. Effect of chamomile aromatherapy with and without oxygen on pain of women in post cesarean section with spinal anesthesia: A randomized clinical trial. *Heliyon*. 2023 Apr 11;9(4):e15323. doi: 10.1016/j.heliyon.2023.e15323. PMID: 37123948; PMCID: PMC10133761.

The Impact of Fir Essential Oil Inhalation on Autonomic Nervous Activity in Middle-aged Women

Introduction:

In this section, we will delve into a recent study conducted by Kim, Lee, and Song (2023) that explores the effect of short-term inhalation of fir essential oil on autonomic nervous activity in middle-aged women. Understanding the findings of this study can help us better comprehend the potential benefits and practical applications of using essential oils in applicable clinical settings.



Study Background:

The study published in Explore (NY) examined the impact of fir essential oil inhalation on the autonomic nervous system, which plays a pivotal role in regulating bodily functions and responding to stress. The researchers focused on middle-aged women, a demographic that often experiences various physiological and psychological challenges. The aim was to investigate whether inhalation of fir essential oil could influence autonomic nervous activity and potentially provide therapeutic benefits.

Methods and Findings:

The researchers employed a randomized controlled trial design to investigate the effects of fir essential oil inhalation. A total of 60 middle-aged women were divided into two groups: an experimental group exposed to fir essential oil and a control group exposed to a placebo. The participants underwent autonomic nervous system assessments before and after the inhalation period.

Results:

The results of the study revealed significant differences between the experimental and control groups. The women who inhaled fir essential oil demonstrated a more balanced autonomic nervous system with increased parasympathetic activity and decreased sympathetic activity compared to the control group. These findings suggest that short-term inhalation of fir essential oil may promote relaxation and alleviate stress-related symptoms.

Practical Implications for Health Professionals:

1. Stress reduction: As health professionals, we often encounter patients experiencing stress-related symptoms. Incorporating the inhalation of fir essential oil into relaxation techniques, such as deep breathing exercises or meditation, could potentially enhance stress reduction efforts and improve overall well-being.
2. Complementary therapy: Fir essential oil inhalation can serve as a complementary therapy alongside conventional interventions for middle-aged women dealing with autonomic dysregulation, anxiety, or sleep disturbances. It may be beneficial to discuss

this option with patients and explore their interest in integrating it into their treatment plans.

3. Patient education: With the rising popularity of essential oils, it is crucial to provide patients with accurate information and guidelines for safe usage. Educate your patients about the appropriate dilution ratios, methods of inhalation, and potential contraindications. Ensure that patients understand the limitations of essential oils as adjunctive therapies rather than standalone treatments.
4. Individualized approach: Each patient is unique, and their response to essential oils may vary. When incorporating fir essential oil inhalation into patient care, consider individual preferences, health conditions, and potential allergies. Always encourage open communication and monitor patients for any adverse reactions or side effects.

Conclusion:

The research conducted by Kim, Lee, and Song sheds light on the potential benefits of short-term inhalation of fir essential oil on autonomic nervous activity in middle-aged women. By understanding the implications of this study, health professionals can incorporate this information into their practice, offering patients additional options for managing stress, promoting relaxation, and supporting overall well-being. However, it is essential to approach essential oil usage with caution and tailor the treatment plan to each individual's specific needs, always considering safety and informed decision-making.

References:

Kim C, Lee G, Song C. The Effect of Short-term Inhalation of Fir Essential Oil on Autonomic Nervous Activity in Middle-aged Women. *Explore (NY)*. 2023 Apr 21:S1550-8307(23)00104-0. doi: 10.1016/j.explore.2023.04.006. Epub ahead of print. PMID: 37120331.

The Soothing Scent of Lemon Verbena Essential Oil: A Natural Approach to Reducing Anxiety Before Caesarean Section

Introduction:

Anxiety is a common experience among expectant mothers, particularly those awaiting a caesarean section. The use of essential oils as a complementary therapy to alleviate anxiety has gained significant attention in recent years. A recent randomized clinical trial explored the effects of the aroma of lemon verbena essential oil on anxiety and the hemodynamic profile of women undergoing caesarean sections. In this blog post, we will delve into the study's findings and discuss the implications for health professionals in managing anxiety in this specific population.



Study Overview:

The study titled "Effects of the aroma of lemon verbena (*Aloysia citriodora* Paláu) essential oil on anxiety and the hemodynamic profile before caesarean section" conducted by Haryalchi et al. aimed to investigate the potential benefits of lemon verbena essential oil in reducing anxiety levels and modulating the hemodynamic profile before caesarean section procedures. The study included a randomized clinical trial design and enrolled a group of women scheduled for caesarean section.

Findings:

The results of the study revealed that exposure to the aroma of lemon verbena essential oil significantly reduced anxiety levels in the intervention group compared to the control group. The participants who inhaled the aroma of the essential oil experienced a greater sense of calmness and relaxation. Additionally, the hemodynamic profile of the intervention group showed improved stability during the preoperative period.

Implications for Health Professionals:

1. **Alternative non-pharmacological intervention:** The findings of this study highlight the potential role of lemon verbena essential oil as a non-pharmacological intervention to reduce anxiety before caesarean sections. Health professionals can consider incorporating aromatherapy with lemon verbena essential oil into their practice as an adjunct therapy to alleviate anxiety in expectant mothers.
2. **Personalized care and patient preferences:** Anxiety management is an essential aspect of providing quality care to women undergoing caesarean sections. By offering aromatherapy options such as lemon verbena essential oil, healthcare professionals can address the individual needs and preferences of their patients, promoting a patient-centred approach to care.
3. **Reducing pharmacological interventions:** The use of essential oils as a complementary therapy may potentially reduce the need for pharmacological interventions, such as anxiolytic medications, in some cases. This can have additional benefits, including minimizing potential side effects and drug interactions.
4. **Enhancing the birth experience:** A calm and relaxed environment positively impacts the birth experience for both the mother and the medical team involved. By incorporating aromatherapy with lemon verbena essential oil, health professionals can contribute to creating a soothing atmosphere, potentially leading to improved patient satisfaction and overall well-being.
5. **Safety precautions and individual sensitivities:** While aromatherapy is generally considered safe, health professionals should ensure that their patients do not have any

allergies or sensitivities to essential oils. Prior to implementing aromatherapy, it is crucial to perform a thorough assessment of the patient's medical history and obtain informed consent.



Conclusion:

The study exploring the effects of lemon verbena essential oil on anxiety and the hemodynamic profile before caesarean section provides valuable insights into the potential benefits of aromatherapy in this specific context. Incorporating the use of lemon verbena essential oil as a complementary therapy may offer a natural and effective way to reduce anxiety levels and enhance the overall birthing experience for expectant mothers. As health professionals, it is essential to remain open to alternative therapies and approaches that can improve patient outcomes and promote holistic care.

References:

Haryalchi K, Kazemi Aski S, Mansour Ghanaie M, Fotouhi M, Mansoori R, Sadraei SM, Yaghobi Y, Olangian-Tehrani S. Effects of the aroma of lemon verbena (*Aloysia citriodora* Paláu) essential oil on anxiety and the hemodynamic profile before cesarean section: A randomized clinical trial. *Health Sci Rep.* 2023 May 20;6(5):e1282. doi: 10.1002/hsr2.1282. PMID: 37216059; PMCID: PMC10199455.

The Power of Scents: Exploring the Psychological States of Olfactory Stimuli and Its Implications for Health Professionals

Introduction:

As responsible practitioners, we strive to provide holistic care to our patients, recognizing the interplay between their physical and mental well-being. In a fascinating new study, Laohakangvalvit et al. (2023) delve into the realm of olfactory stimuli and investigate its impact on psychological states. By employing electroencephalography (EEG) and heart rate variability (HRV), the researchers shed light on the complex relationship between scents and our emotions. In this blog post, we will explore the findings of this study and discuss its implications for health professionals.



Understanding the Study:

The study conducted by Laohakangvalvit et al. sought to examine the psychological effects of olfactory stimuli through the measurement of EEG and HRV. The researchers exposed participants to different scents and monitored their brain activity and heart rate variations. The results revealed significant associations between specific scents and changes in psychological states, such as stress, relaxation, and mood.

Implications for Health Professionals:

1. **Therapeutic Use of Scents:** The findings of this study provide health professionals with valuable insights into the potential therapeutic use of scents in various healthcare settings. Incorporating pleasant and soothing fragrances into clinics, hospitals, and other healthcare environments could help create a more calming and stress-reducing atmosphere for patients. Additionally, aromatherapy, a complementary therapy that utilizes essential oils and scents, may prove beneficial in managing patients' psychological well-being.
2. **Tailoring Environments for Patient Comfort:** By understanding the psychological impact of olfactory stimuli, health professionals can make informed decisions about creating patient-centred environments. For example, using specific scents known to induce relaxation (e.g. such as lavender oil and ylang ylang), and reduce anxiety, may enhance the overall experience for patients undergoing medical procedures or staying in hospital settings. This could potentially lead to better patient satisfaction and improved outcomes.
3. **Mental Health Interventions:** The study's findings also highlight the potential role of olfactory stimuli in mental health interventions. Integrating the use of specific scents into therapy sessions, such as cognitive-behavioural therapy or mindfulness-based interventions, may help regulate emotions, promote relaxation, and enhance the overall effectiveness of treatment. However, further research is warranted to determine the specific scents and individual variations in response.
4. **Enhanced Patient Communication and Engagement:** Recognising the impact of scents on psychological states can also aid health professionals in fostering better communication and engagement with their patients. By incorporating scents that promote positive emotions and relaxation, healthcare providers can create a more welcoming and

comfortable environment, facilitating open dialogue and establishing trust with their patients.

Conclusion:

The research conducted by Laohakangvalvit et al. provides health professionals with valuable insights into the psychological states influenced by olfactory stimuli. Understanding the impact of scents on emotional well-being can help us create more patient-centred care environments, optimize mental health interventions, and enhance patient experiences.

References:

Laohakangvalvit T, Sripian P, Nakagawa Y, Feng C, Tazawa T, Sakai S, Sugaya M. Study on the Psychological States of Olfactory Stimuli Using Electroencephalography and Heart Rate Variability. *Sensors (Basel)*. 2023 Apr 16;23(8):4026. doi: 10.3390/s23084026. PMID: 37112367; PMCID: PMC10143627.

In conclusion - and thanks!

As we continue to explore the mind-body connection, let us harness the art and science of aromatherapy and the power of scents to uplift the spirits and promote overall well-being in our patients.

Essential oils are powerful therapeutic interventions – and should be used judiciously – ensuring that the oils used are safe and appropriate for our patients as individuals.

We want to take this opportunity to acknowledge the brilliance of all CMA Registered Aromatherapy professionals and our numerous CMA Registered Training Schools who offer outstanding aromatherapy courses. You are doing such important work and making a huge contribution to the health of our various nations and we, here at The CMA, are incredibly proud of you – thank you for all you do!



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