The Effectiveness of Aromatherapy on Depression Among Senior Citizens Residing in Selected Old Age Homes in Satara District

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ABSTRACT

Introduction: Depression is a common mental health disorder marked by pervasive feelings of sadness, isolation, irritation, diminished self-esteem, despair, restlessness, and guilt, frequently accompanied by physical symptoms. Aromatherapy, a complementary medicine practice, utilizes plant materials and aromatic oils to influence mood, cognition, psychological state, and physical well-being. Neroli oil, a favored option in aromatherapy, is esteemed for its lovely aroma and possible therapeutic benefits.

Materials and Methods: A quantitative approach with a one-group pretest-posttest design, was conducted in selected old-age homes. The target population includes senior citizens residing in these facilities. The sample consists of 60 individuals aged 60 and above, selected through purposive sampling, all diagnosed with depression.

Discussion: Aromatherapy significantly reduced depression levels among senior citizens in old-age homes (P < 0.0001). However, socio-demographic factors did not demonstrate a notable connection with levels of depression in this group. The mean depression score decreased significantly from 27.18 ± 5.58 to 22.33 ± 5.00 (t = 15.704, p < 0.0001) after aromatherapy. There is no association between pre-test levels of depression with demographic variables among senior citizens.

Result: The study assessed the level of depression in senior citizens before and after aromatherapy. In the pretest, most participants (73.34%) experienced moderate, (21.67%) had severe, (3.33%) mild, and (1.66%) had borderline clinical depression. Post-test results revealed that the majority (53.33%) had borderline clinical, (40%) had moderate, (3.34%) had normal, and (3.33%) still had severe depression. The mean depression score decreased significantly after aromatherapy, indicating a substantial reduction in depression levels following the treatment.

Conclusion: In conclusion, aromatherapy is shown to be effective in lowering depression levels among elderly individuals living in retirement homes.

Keywords: Factors, conditions, alternative health care, diabetes

1. INTRODUCTION

3.8% of people worldwide suffer from depression, a serious mood disorder that is more common in adults, the elderly, pregnant women, cancer patients, and those with heart disease. In addition to having detrimental impacts on sleep, hunger, fatigue, hopelessness, and the risk of suicide, it worsens physical health, especially in people with chronic illnesses. Treatment includes medications, which can have negative side effects, in addition to non-pharmacological therapies such cognitive behavioral therapy, exercise, and aromatherapy. A comprehensive approach can improve quality of life and assist manage symptoms. [1]

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Depression:

A major mood disease, depression impairs both physical and cognitive health, lowering interest in everyday activities and having a detrimental effect on quality of life and productivity at work. With an estimated 350 million individuals affected and a steadily increasing prevalence, it is a serious worldwide health concern.

Major depressive illness is predicted to be the primary cause of disability by 2030, and suicide claims the lives of around a million individuals annually. Depression causes an estimated USD 210 billion in economic losses in the United States each year. Suicidal thoughts that last longer than two weeks are among the symptoms, which also include exhaustion, changes in eating and sleep patterns, guilt, hopelessness, and a persistent sense of sadness. The diagnosis is made using proven instruments like the Beck Depression Inventory and the Hamilton Depression Rating Scale, both of which. [2]

Family sizes are declining, particularly in metropolitan areas, but the number of senior people in India is increasing quickly (Help Age India, 2013). The nuclear family paradigm is gradually replacing the traditional extended family model. According to Lamb (2007), conventional home-based care for elderly parents has decreased as the number of old age homes has increased. In the past, children—especially sons—have typically been responsible for caring for aging parents. [3]

Because it causes serious sickness and impairment, depression in older persons is becoming a more major public health concern. The World Health Organization (WHO) estimates that between 10 and 20 percent of older adults suffer with this illness, though prevalence varies by culture. Depression among older individuals is not commonly acknowledged as a significant public health issue in India, despite a startlingly high prevalence of 53.7% in nursing facilities.

Depression risk typically rises with age, and women are more likely than males to experience it (58.82%) compared to 44.83%. [4] In addition, people who are divorced, separated, or bereaved have higher rates of depression than people who are married or have never married. Depression can impact all aspects of life, but it is more common in those who have experienced trauma or a significant loss.

People may become more vulnerable as they age due to changes in their social, cognitive, physical, and hormonal abilities. Healthy aging requires maintaining psychological well-being, but many older persons struggle with issues including low self-esteem, diminished social standing, and insufficient financial support, which can make them more dependent on others. [5] An increasing global public health concern, depression in old age contributes to morbidity and disability. The World Health Organization states that it is a prevalent mental illness that affects 10% to 20% of older people, depending on cultural circumstances. It is characterized by melancholy, loss of interest, guilt, low self-worth, sleep difficulties, exhaustion, and poor attention.

Even though India has one of the biggest populations of senior people, depression in this demographic is still not well understood. Loneliness, the absence of intimate family relationships, and decreased community involvement are major causes of depression in older adults. Particularly in rural areas, the erosion of the traditional joint family arrangement has had an additional influence on the well-being of the elderly.

Assessing the frequency of depression in senior living facilities and communities is crucial to enhancing mental health treatment since it reduces productivity and raises healthcare expenses for families. However, India's paucity of community-based studies emphasizes the necessity for more investigation into this matter.

[6] Depression in the elderly should not be seen as a natural part of ageing, as it often presents atypically.

It may manifest as a stress-related response, a syndrome associated with diseases like Parkinson's or hypertension, or a sickness like endogenous depression. Depression in the elderly is also linked to higher suicide rates. Although India's health policies have prioritized illness prevention, maternity and child health, and population control, the growing senior population poses additional social, medical, and financial difficulties.

An increasing number of elderly houses are being built as a result of urbanization, modernity, and shifting family dynamics. Elderly people's mental health is greatly impacted by their physical and social surroundings, which emphasizes the necessity of evaluating and contrasting depression in both community and assisted living facilities. [7] As nuclear families become more common, children often neglect or abandon their aging parents, which is linked to the rise in residential care homes for the elderly. Furthermore, the need for these facilities is being driven by the increased prevalence of chronic conditions among older persons. Due to their weakened physical or financial capacities, older persons are frequently seen as liabilities and are vulnerable to abuse and neglect.

This problem is especially common in underprivileged areas where it is difficult to provide senior citizens with quality care due to financial limitations. There are several ways that mistreatment can manifest, such as financial, emotional, sexual, or physical abuse. [8]

Aging is a normal and inevitable process that brings both wisdom and troubles. In modern culture, elderly individuals are often seen as outdated and useless, despite the fact that they were originally esteemed for their wisdom. As nuclear families have become more common, their status has deteriorated, and many of them have been compelled—sometimes voluntarily,

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and other times to move into assisted living facilities.

Mental diseases like depression are more likely to occur as people age because of changes in memory, cognition, behavior, and personality. According to research, depression and aging are strongly correlated, which has a substantial negative influence on wellbeing and quality of life. A major global mental health concern, depression affects 300 million people globally, and by 2025, that number is predicted to increase to 400 million. [9]

Materials & Methods: Utilizing a one-group pretest-posttest design, this study uses a quantitative research methodology. The degree of depression is the dependent variable, and aromatherapy is the independent variable. Seniors with depression who are 60 years of age or older are the focus of the study, which is carried out in a particular Satara assisted living facility. To ensure a targeted and pertinent sample, participants are chosen using a purposive sampling technique.

Sample size: The sample size consists of 37 people who are over 60 years of age.

$n = (Z\alpha + Z\beta)^2 + (S_1^2 + S2^2)$

$(m2 - m1)2$

$n = (1.96 + 1.64)2 \times (4.222 + 4.752)$

$(15.92 - 19.7)2$

$n = 12.96 \times (17.80 + 22.56)$

14.06

$n = 12.96 \times 40.36$

14.06

$n = 523.0656$

14.06

$n = 37.20$

Although the reference article indicates that the minimum sample size should be 37, it is recommended to include all available participants in the chosen old age home.

Intervention Details: The researcher started the data collection phase by establishing a good connection and introducing herself to the senior residents. To participate in the study, each subject verbally consented. Using the Geriatric Depression Scale to assess mood disorders, 60 people who satisfied the criteria for depression were found. The confidentiality of all obtained data was assured to the participants. There was an initial assessment of depression levels throughout the first week. The participants' foreheads were rubbed with five drops of neroli oil and ten milliliters of coconut oil for the next fifteen days. Following the completion of the aromatherapy treatment, the Geriatric Depression Scale was used to reevaluate depression levels.

Step 1: After receiving approval from the appropriate authority, the data collection process got underway. The goal of the study was communicated in detail to the participants in order to foster a positive relationship and their cooperation.

Step 2: Written informed consent was obtained.

Step 3: Socio-demographic data was collected from participants.

Step 4: General features: As a pre-test, the degree of depression was assessed using a geriatric depression scale on an elderly resident of an assisted living facility. Additionally, I allowed time for the test. 15 to 20 minutes was the old age depression level.

Step 5: Following two weeks of aromatherapy exposure for the experimental group, the intervention was administered once daily for 15 to 20 minutes, and the post-test was administered using the same method as the pretest to gauge the participants' level of depression.
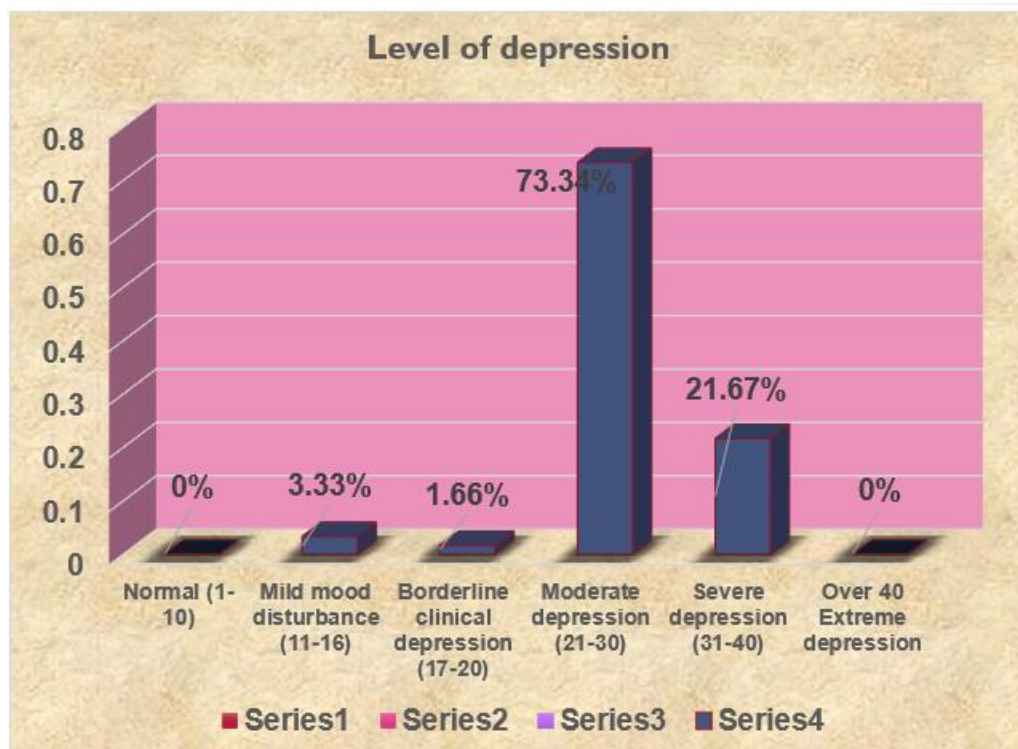
Step 6: The post-test was done after 2 weeks.

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2. RESULT

Table 1: Frequency and percentage distribution of sample according to their depression scale.

n=60

Level of depression	Pre-test		Post-test	
	Frequency	Percentage	Frequency	Percentage
Normal (1-10)	00	00%	02	3.34%
Mild mood disturbance (11-16)	02	3.33%	00	00%
Borderline clinical depression (17-20)	01	1.66%	32	53.33%
Moderate depression (21-30)	44	73.34%	24	40%
Severe depression (31-40)	13	21.67%	02	3.33%
Extreme depression (Over 40)	00	00%	00	00%

Figure 1- Showing the percentage distribution of level of depression of pre-test.

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Figure 1- According to the depression scale the majority of samples 44 (73.34%) have moderate, 13 (21.67%) severe, 2 (3.33%) have mild mood disturbances 1 (1.66%) are having borderline clinical depression. 0 (0%) normal depression and extreme depression are not present in participants.
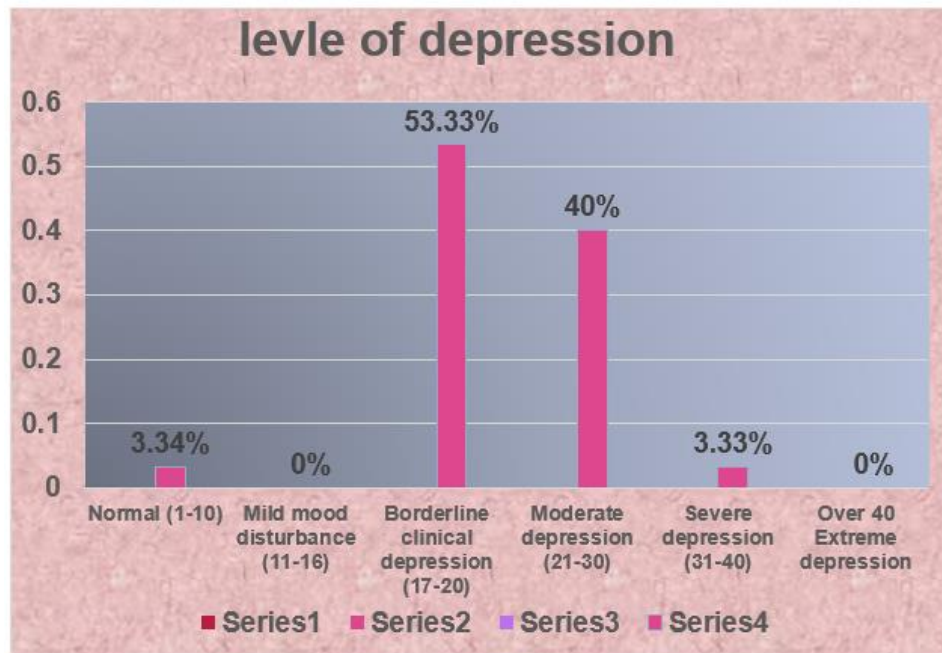

Fig 2- . Showing the percentage distribution of level of depression of post-test.

Fig - 2 In the post-test majority of samples 32 (53.33%) have Borderline clinical depression, and 24 (40%) are moderate. 2 (3.33%) have Severe depression.2 (3.34%) having a normal depression. 0 (0%) Mild mood disturbance and extreme depression are not present in participants. After giving Aromatherapy the post-test Result is highly significant.

3. DISCUSSION

The group pre-test and post-test study used to gauge older people' depression levels is presented in this chapter. The Geriatric Depression Scale was used to assess depression; it records answers as "yes" or "no." The Beck Depression Inventory (BDI) is another, [10] Major symptoms of depression, such as mood, pessimism, feelings of inadequacy, guilt, self-punishment, self-hatred, self-blame, suicidal thoughts, sobbing, irritability, social withdrawal, and changes in body image, were evaluated using a 21-item self-report questionnaire. Based on BDI scores, depression intensity was divided into four categories: minimal depression (scores 0–9), mild depression (10–18), moderate depression (19–29), and severe depression (30–63).

The majority of client in this study—44, or 73.34%—had moderate depression on the pre-test, while 13 (21.67%) had severe depression. One individual (1.66%) had borderline clinical depression, and two (3.33%) had mild mood depression. The post-test findings, however, revealed that 32 (53.33%) of the participants had borderline clinical depression, 24 (40%) had moderate depression, 2 (3.34%) had normal depression, and 2 (3.33%) were still suffering from severe depression.

In the present study, Aromatherapy significantly reduces depression levels among senior citizens in old age homes, as demonstrated by a notable decrease in mean depression scores post-treatment, measured using the Geriatric Depression Scale. This finding aligns with the study by **Kaur MH, and Salwan MK, 25th June 2020.** This study aims to determine the degree of depression experienced by senior adults living in specific Amritsar old age homes. The research design used for this study was a descriptive survey. To gather the data, a self-structured questionnaire was employed. The investigation, which involved 60 samples, was carried out in the city of Amritsar. On the basis of descriptive and inferential statistics, the gathered data was examined and evaluated. According to the study's findings, geriatrics experienced a notable degree of depression. [9]

Again in a similar study, conducted by **Mr. Sathiyapreethi in April 2012,** the pre-test results indicated that 37.5% of the subjects (15 participants) experienced moderate depression, another 37.5% (15 participants) had mild depression, and 25% (10 participants) suffered from severe depression. After the intervention, the post-test results showed a shift, with 52.5% (21 participants) exhibiting mild depression, 32.5% (13 participants) displaying moderate depression, 5% (2 participants) remaining in severe depression, and 10% (4 participants) showing no signs of depression. t is evident from comparing these results with the current study that there are significant differences in the levels of depression among older adults prior to aromatherapy. [11]

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4. CONCLUSIONS

The study findings indicate that aromatherapy effectively reduces depression levels among senior citizens in old age homes. A significant decrease in mean depression scores, measured using the Geriatric Depression Scale, highlights the positive impact of aromatherapy in alleviating depressive symptoms.

LIMITATION

- The research was confined to a single old age home in Satara District, potentially affecting the generalizability of the results.
- The relatively small sample size may limit the statistical power of the findings.

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