

# GIVING EFFECT OF LAVENDER AROMATHERAPY A SENSE OF DEPRESSION IN PATIENTS USING THE INSTRUMENT COVID-19 HRS-A

<sup>1</sup>Vittria Meilinda, <sup>2</sup>Sherly Amelia

<sup>2</sup>Faculty of Health, University of Fort De Kock Bukittinggi, West Sumatra, Indonesia

---

## ARTICLE INFO

### Keywords:

Lavender,  
feelings of depression  
Covid -19

---

## ABSTRACT

Entering 2 years of the pandemic in Indonesia has caused anxiety for positive confirmed patients. In the latest data in December 2021, there were 278 new cases with an average of 321 cases in 1 week. Feelings of depression are included in the pattern of anxiety and mental health problems if too much is felt by someone which results in psychological anomalies during the Covid-19 pandemic. Lavender oil is known to contain anti-inflammatory, anti-fungal, antiseptic, anti-bacterial and anti-depressant that can help relax (properties carminative therapy). The content of linalyl acetate and linalool (C<sub>10</sub>H<sub>18</sub>O) The purpose of this study was to determine the effect of giving lavender aromatherapy on feelings of depression in Covid-19 patients. Data collection was carried out by observation using the HRS-A (instrument Hamilton Rating Scale Anxiety). The research design in this study was a quasi-experimental design with a pre-and post-test without control design. The sample in this study was 20 people who were confirmed positive for Covid-19 in the work area of the Bukittinggi City Health Office. The results of research conducted on positive confirmed subjects before being given treatment got an HRS-A score of 55 and after being given treatment, a HRS-A score of 26 was obtained so that the difference was 29 very significant values in reducing feelings of depression in patients who were confirmed positive for COVID-19. It is hoped that this research can provide an overview to be used as an alternative in reducing feelings of depression.

---

### E-mail

vittriameilinda@fdk.ac.id  
sherlyamelia@fdk.ac.id

Copyright © 2022 Science Midwifery.

---

## 1. Introduction

Coronavirus Disease 2019 (Covid-19) is an infectious disease caused by Severe Acute Respiratory Syndrome Coronavirus 2 (SARSCov-2) which is a new type of coronavirus that has never been previously identified in humans. There are 2 types of viruses that are known to cause diseases that can cause severe symptoms such as Middle East Respiratory Syndrome (SARS). The average incubation period is 5-6 days with the longest incubation period being 14 days. (Minister of Health of the Republic of Indonesia No.01.07(2020).

The problem of covid-19 has caused increased anxiety for everyone, especially in patients who are confirmed positive for COVID-19. Health experts also warn that most people can also experience prolonged mental health problems. and can be longer than the incubation period passed by that person. The Psychology of Pandemics at the University of British Columbia, argues that for 10-15% of minorities with middle income, social life to return to normal takes quite a long time because of the impact of the pandemic. on their mental well-being due to feelings of depression. (Steven, 2020) . Initial measures to minimize the spread of the virus, such as the implementation of quarantine, can have negative impacts such as symptoms of post-traumatic stress, insomnia and depression. The main UNICEF report warns that children and young people have the potential to experience long-term effects. long term Covid-19 on mental health. Based on

the latest data estimated there are more than 1 out of 7 aged adults in the world who live with mental disorders with quarantine regulations of national restrictions on mobility due to pandemic (UNICEF, 2021)

Anxiety felt an initial response to the situation on the exposed SARs-CoV-2 and anxious family safety with visible psychosomatic symptoms such as fever, sore throat and dizziness. (Vibriyanti, 2020). Therapies for reducing anxiety (feeling depression) are divided into two, namely pharmacological (anxiolytic) and non-pharmacological (relaxation). For non-therapy pharmacological that can be used with complementary therapy using aromatherapy. (Ratih, 2012) Lavender (*Lavandula angustifolia*) is part of a plant that belongs to the family Lamiaceae and has a genus consisting of 25-35 sub-species and provides a diverse morphology. This plant is found in the form of an aromatic shrub 1-2 meters high, which has gray to dark brown branches. Lavender flowers are dark purple to dark blue and 25-35 cm high, the number of flowers in one stem reaches 6-10 pieces. The leaves are clustered on the leaf buds, have a fairly wide distance on the flowering shoots (WHO, 2007). Lavender oil which contains linalool is one of the widely used aromatherapy, by inhalation (inhaled). Lavender is dripped as much as five drops with 30 ml of water that is evaporated for 15 minutes to be inhaled by inhalation by the patient. The positive impact of aromatherapy on reducing anxiety levels will be more felt when given directly (inhalation) because the nose has direct contact with the parts of the brain that are in charge of stimulating the formation of the effects caused by aromatherapy. (Dewi, 2017).

## 2. Method

The research design in this study was quasi-experimental with the design used is a pre and post test design without control. The sample in this study was 20 people who were confirmed positive for Covid-19 in the work area of the Bukittinggi Health Office. The instruments used in this study were lavender aromatherapy SOP sheets and the HRS-A (Hamilton Anxiety Rating Scale) questionnaire.

## 3. Result And Discussion

### 3.1 Result

TABLE 1  
FREQUENCY DISTRIBUTION OF RESPONDENTS BASED ON FEELINGS OF DEPRESSION BEFORE GIVING LAVENDER AROMATHERAPY USING THE HRS-A INSTRUMENT IN PATIENTS WHO WERE CONFIRMED POSITIVE FOR COVID-19 (PRE-TEST)

No	Assessment Anxiety (feeling depression)	Frequency points HRS-A	%
1	Loss of interest	9	16,3%
2	Decreased pleasure in hobbies	10	18,1%
3	Sadness	18	32,9%
4	Waking up early	12	21,8%
5	Feelings fluctuate throughout the day	6	10,9%

Based on table 1 above, it was found that most (32.9%) of respondents experienced feelings of depression before being given lavender aromatherapy treatment to patients who were confirmed positive for COVID-19.

TABLE 2  
FREQUENCY DISTRIBUTION OF RESPONDENTS BASED ON FEELINGS OF DEPRESSION BEFORE GIVING LAVENDER AROMATHERAPY USING THE HRS-A INSTRUMENT IN PATIENTS WHO WERE CONFIRMED POSITIVE FOR COVID-19 (POST-TEST)

No	Assessment Anxiety (feeling depression)	Frequency points HRS-A	%
1	Loss of interest	4	7,2%
2	Decreased pleasure in hobbies	5	9%
3	Sadness	9	16,3%
4	Waking up early	5	9%
5	Feelings fluctuate throughout the day	3	5,4%

Based on table 2 above, it was found that most of the decreases in each assessment of feelings of depression on the HRS-A instrument.

TABLE 3  
THE EFFECT OF GIVING LAVENDER AROMATHERAPY ON FEELINGS OF DEPRESSION IN COVID-19 PATIENTS USING THE HRS-A INSTRUMENT

No	Anxiety Assessment (feeling depression)	Pretest		Posttest		P-value
		N	%	N	%	
1	Loss of interest	9	16,3%	4	7,2%	0.000
2	Decreased pleasure in hobbies	10	18,1%	5	9%	
3	Sadness	18	32,9%	9	16,3%	
4	Waking up early	12	21,8%	5	9%	
5	Feelings fluctuate throughout the day	6	10,9%	3	5,4%	

The statistical test results in table 3 using the Wilcoxon signed ranks test show that H0 is rejected and H1 is accepted, so there is a significant effect. significant giving of lavender aromatherapy to feelings of depression using the HRS-A instrument in covid-19 patients, which was indicated by a p value = 0.000 ( $\alpha < 0.05$ )

### 3.2 Discussion

#### a. Effect before giving lavender aromatherapy to feelings of depression in covid-19 patients

Judging from the research results that Most (32.9%) of respondents experienced feelings of depression and sadness before being given treatment with lavender aromatherapy on patients who were confirmed positive for COVID-19. Points from other HRS-A Instruments loss of interest (16.3%), reduced enjoyment of hobbies (18.1%), early risers (21.8%), and mood swings throughout the day (10.9%) . From these results, patients who were confirmed positive for COVID-19 were categorized as having severe anxiety at the point of feeling depressed with a score of 55.

Aromatherapy in addition to improving the patient's physical and psychological state, aromatherapy can provide relaxation for nerves and muscles. Relaxation is a way to deal with anxiety or stress through relaxation of muscles and nerves. In line with the study of Lavender Essential Oil in Anxiety Disorders where there was an effect before giving lavender essential oil therapy where all samples were categorized as having moderate and severe anxiety according to the HRS-A instrument assessment with short-term benefits with minimal potential for pharmacokinetic drug interactions. (Malcolm & Tallian, 2017) Another study on Anxiolytic Terpenoids and Aromatherapy for Anxiety and Depression where anxiety and depression are serious health problems that affect most of the population, but drug therapy is not always effective which can lead to drug abuse and dependence so that herbal aromatherapy solutions for anxiety reduction highly recommended. (Agatonovic-Kustrin et al, 2020)

#### b. The effect after giving lavender aromatherapy on feelings of depression in covid-19 patients

It can be seen from the results of the study that most (16.3%) respondents still experienced feelings of depression after being given treatment with lavender aromatherapy to patients who were confirmed positive for COVID-19. Points from the other HRS-A Instruments are loss of interest (7.2%), reduced enjoyment of hobbies (9%), early risers (9%), and mood swings throughout the day (5.4%). From these results, categorized as patients who were confirmed positive for COVID-19, there was a decrease in anxiety at points of depression with a score of 26 with an average decrease of 10.62. In the study of Lavender oil-potent anxiolytic properties via modulating voltage dependent calcium channels, it was proven that there was an effect of giving lavender aromatherapy to reduce feelings of depression and anxiety. Lavender oil inhibits VOCC in synaptosomes, primary hippocampal neurons which is one of the brain regions important for anxiety disorders (Schuwald et al, 2013). Research in line with Effects of Lavender on Anxiety: A systematic review and meta-Dalam penelitian Lavender oil-potent anxiolytic properties via modulating voltage dependent calcium channels analysis The results obtained that the effectiveness of lavender aromatherapy was felt by several research samples to reduce anxiety and depression (Donelli et al, 2019).

### 4. Conclusion

Based on the results of research with respondents related to feelings of depression with the conditions experienced, it can be concluded Before giving lavender aromatherapy, the patient's depression was confirmed positive Most (32.9%) 18 respondents experienced feelings of sad depression, 9 respondents (16.3%) lost interest in doing any activity, 10 respondents (18.1%)

decreased pleasure in hobbies, 12 respondents (21.8%) experienced early morning awakening and 6 respondents (10.9%) experienced fluctuating feelings throughout the day. After giving lavender aromatherapy, there was a decrease in feelings of depression where the difference in the decrease in points of loss of interest was 9.1%, reduced pleasure in hobbies as much as 9.1%, reduced feelings of sadness as much as 16.6%, decreased early morning wake up as much as 12.8 % and a 5.5% reduction in mood swings throughout the day.

## References

- Agatonovic-Kustrin, S., Kustrin, E., Gegechkori, V., & Morton, D. W. (2020). Anxiolytic Terpenoids and Aromatherapy for Anxiety and Depression. *Advances in Experimental Medicine and Biology*, 1260, 283–296. [https://doi.org/10.1007/978-3-030-42667-5\\_11](https://doi.org/10.1007/978-3-030-42667-5_11)
- Donelli, D., Antonelli, M., Bellinazzi, C., Gensini, G. F., & Firenzuoli, F. (2019). Effects of lavender on anxiety: A systematic review and meta-analysis. *Phytomedicine: International Journal of Phytotherapy and Phytopharmacology*, 65, 153099. <https://doi.org/10.1016/j.phymed.2019.153099>
- Dila, D.R., Putra, F. and Arifin, R.F., 2017. THE INFLUENCE OF LAVENDER AROMATHERAPY TO REDUCTION MOTHE S ANXIETY PRE OPERATION SECTIO CAESAREA IN PARADISE MATERNITY HOSPITAL KECAMATAN SIMPANG EMPAT BATULICIN 2017. CNJ: *Caring Nursing Journal*, 1(2), pp.51-56.
- Kang, H.-J., Nam, E. S., Lee, Y., & Kim, M. (2019). How Strong is the Evidence for the Anxiolytic Efficacy of Lavender?: Systematic Review and Meta-analysis of Randomized Controlled Trials. *Asian Nursing Research*, 13(5), 295–305. <https://doi.org/10.1016/j.anr.2019.11.003>
- Liao, X., Wang, Q., Fu, J., & Tang, J. (2015). [Main Components of Xinjiang Lavender Essential Oil Determined by Partial Least Squares and Near Infrared Spectroscopy]. *Guang pu xue yu guang pu fen xi = Guang pu*, 35(9), 2526–2529.
- Makolm, B. J., & Tallian, K. (2017). Essential oil of lavender in anxiety disorders: Ready for prime time? *The Mental Health Clinician*, 7(4), 147–155. <https://doi.org/10.9740/mhc.2017.07.147>
- Meti, P. and Sri Wahyuni, S., 2020. AROMATERAPI UNTUK MENGURANGI NYERI PERSALINAN.
- Schuwald, A. M., Nöldner, M., Wilmes, T., Klugbauer, N., Leuner, K., & Müller, W. E. (2013). Lavender oil-potent anxiolytic properties via modulating voltage dependent calcium channels. *PLoS One*, 8(4), e59998. <https://doi.org/10.1371/journal.pone.0059998>
- (Kang et al, 2019) Agatonovic-Kustrin, S., Kustrin, E., Gegechkori, V., & Morton, D. W. (2020). Anxiolytic Terpenoids and Aromatherapy for Anxiety and Depression. *Advances in Experimental Medicine and Biology*, 1260, 283–296. [https://doi.org/10.1007/978-3-030-42667-5\\_11](https://doi.org/10.1007/978-3-030-42667-5_11)
- Liao, X., Wang, Q., Fu, J., & Tang, J. (2015). [Main Components of Xinjiang Lavender Essential Oil Determined by Partial Least Squares and Near Infrared Spectroscopy]. *Guang pu xue yu guang pu fen xi = Guang pu*, 35(9), 2526–2529.
- UNICEF,2019  
WHO,2020