

The Effect Of Giving Lemon Aromatherapy And Health Education On Pregnancy Anxiety Covid 19 Pandemic At Duingingi Health Center And Kota Barat Health Center The City Of Gorontalo

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ARTICLE INFO

Keywords:

Lemon Aromatherapy,
Health Education,
Pregnancy Anxiety

ABSTRACT

Psychologically, mothers experience anxiety during pregnancy because they are worried that the baby will be born healthy or not, especially during Covid-19 pandemic. Pregnant women who are not prepared enough for giving birth will be more anxious and show fear and behave in silence or crying, if this continues until labor can cause pathological condition (Wa Ode et al, 2013). This study aimed to identify the effect of anxiety in pregnancy before and after being given lemon aromatherapy and health education. This research was a quasi-experimental using one-group pre-test post-test control design with cases of anxious third trimester pregnant women who are given lemon Aromatherapy and cases control of anxious third trimester pregnant women who was given education through books at the same time. The research was carried out in the working area of Kota Barat Public Health Community and Duingingi Public Health Community in Gorontalo City from August to November 2020. The provision of lemon aromatherapy and health education as independent variable, the anxiety level of the third trimester of pregnant women as dependent variable. The research subjects were carried out by selecting samples that met the inclusion criteria, totaling 60 pregnant women in the third trimester and divided into the intervention group and the control group. Data analysis using Paired T-test with free sample test and difference test. The results of the study of the two groups, the mean value of the intervention group had a higher difference in anxiety level score reduction (9.6) than the control group (4.0) with significance value of 0.000 and 0.038, respectively ($\alpha = 0.05$). The conclusion was, there is an effect of lemon aromatherapy and health education on the anxiety level of pregnant women in the third trimester of the Covid 19 pandemic at the Duingingi Health Center and the West City Health Center, Gorontalo City.

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1. Introduction

Changes in the early pregnancy of pregnant women are very much influenced by hormones which result in many changes both physically and psychologically. Psychologically, the mother experiences anxiety and anxiety during pregnancy which is inevitable, this is a normal adjustment process during pregnancy (Kushartanti, 2010). Concerns and worries in pregnant women if not handled seriously will have an impact and influence on physical and psychological. Physical and psychological are two things that are related and influence each other. If the physical condition is not good, then the thought processes, moods, and actions concerned in daily life will be negatively affected (Dharma, 2018)

Data for the 2018 Health Profile The maternal mortality rate (MMR) in Indonesia is 305 per 100,000 live births, but it does not achieve the SDG's target of 70 per 100,000 live births. Based on data from the Gorontalo Provincial Health Office in 2018 the KIA / KB section, the number of maternal deaths was 29 people, in the Gorontalo city area as many as 5 people, 7 people in Gorontalo district, 6 people in Boalemo district, 5 people in Pohuwato district, 3 people in bone bolango district, and North Gorontalo District (Provincial Health Office Profile, 2018). Anxiety is generally associated with a threatening situation so that the mother feels uncomfortable. However, anxiety will have a negative impact if pregnant women are anxious from pregnancy to delivery, the impact is that the fetus is restless so that it inhibits its growth, weakens uterine muscle contractions, premature labor and low birth weight which can endanger the mother and fetus (Wulandari & Safitri, 2016)

Covid 19 cases in Indonesia continue to increase until 23 August 2020 Indonesia has reported 153,535 positive cases, with 6,680 deaths, 107,500 have recovered and 39,355 cases are currently being treated. The Indonesian government has tested 1,157,184 people out of a total population of 269 million, which means around 4,293 people per one million population. (Wikipedia, 2020). Data from the Covid Management Group 19 Gorontalo provincial health service until 22 June 2020 has recorded a total of 231 people who were treated 80 people, recovered 143 people and died 8 people. One of those infected with Covid is a pregnant woman who has been declared cured, considering this, many pregnant women are worried about the condition of themselves and their babies who are afraid of contracting Covid 19 (DKJPS, 2020). Anxiety about COVID-19 often occurs because people are afraid because so far no vaccine has been found to treat this virus. This anxiety is felt by pregnant women around the COVID-19 Red Zone because pregnant women are more susceptible to being infected with the Virus (Angesti Ervina, 2020)

This anxiety is based on how this virus is spread because it can be passed through droplets when sneezing, talking or coughing. Droplets can attach to objects and surfaces such as tables, doorknobs and others. A person can be infected by this virus if they touch the object or surface of the object which then touches the eyes, nose and mouth without washing their hands (WHO, 2020) (Angesti Ervina, 2020) Therapy that can be done to overcome anxiety in pregnant women is pharmacological therapy and non-pharmacological therapy. One way of non-pharmacological therapy is relaxation therapy with aromatherapy. Based on research, various aromatic oils from flowers and wood have therapeutic and psychotherapeutic properties. The aroma of lemon therapy contains Linalool and Linalyl acetat which can stimulate serotonin secretion and can trigger GABA which can reduce anxiety. Recent research has shown that the effect of essential fragrances on the body and mind can relieve stress, increase immunity and lead to feelings of fitness (Dadang, 2018).

According to a preliminary study conducted by researchers, data was obtained from PDP postpartum mothers who died from Covid 19 at the Duingingi Health Center through interviews with pregnant women around the red zone area, especially in the working area of the Duingingi Community Health Center and the West City Community Health Center. red and facing the new normal they are afraid that they will be infected with covid 19 while pregnant and even others want to move and board to another place. Based on the above phenomenon, the researcher wanted to conduct research using lemon aromatherapy and health education in reducing anxiety in third trimester pregnant women during the COVID-19 pandemic in the working area of Duingingi Health Center and Puskesmas Kota Barat, Gorontalo City.

2. Method

This type of research used Quasi Experiment with a control approach group pretest posttest design, which is a design to determine the effects before and after treatment in the intervention group, namely lemon aromatherapy and the control group, namely the provision of health education to determine the level of anxiety of pregnant women in the third trimester of the Covid pandemic 19.

The variables in this study were the independent variables, namely the provision of lemon aromatherapy and health education and the dependent variable was the anxiety level of pregnant women in the third trimester of the COVID-19 pandemic in the working area of Duingingi Health Center and West City Health Center, Gorontalo City.

3. Results And Analysis

a. Univariate Analysis

Table 1.
Respondens Age Distribution at Duingingi

Age	Intervention Group		Control Group	
	N	%	N	%
<20	1	3.33	1	3.33
20-35	27	90.0	28	93.4
>35	2	6.67	1	3.33
N	30	100%	30	100%

Based on the table above, it can be seen that more dominant in the two groups, both intervention and control, is the age group 20 to 35 years, namely 90.0% and 93.4%.

The description of the age of the respondents as listed in table 1 shows that in the intervention group the most were in the age range of 20 to 35 years, namely 90.0%, in the control group also the most were the age range of 20 to 35 years, namely 93.4%. low risk during pregnancy, namely ages 20 to 35 years. It is known that the age below 20 years and over 35 years is in the risk category. From this risky age category, it can be concluded that pregnant women under 20 years of age and over 35 years of age can have complications or disorders of pregnancy. Pregnant women will feel anxious related to the mother's age. Young mothers are more prone to experiencing higher anxiety than pregnant women aged enough. The tendency of anxiety experienced by young women during pregnancy is when it is time to give birth. A mother who is of sufficient age will be better prepared mentally and physically to overcome worries about the condition of pregnancy and childbirth later (Ary Suliastiawaty, 2015)

Table 2.
The category axienty level before treatment on the respondent

Anxiety Level	Intervention Group		Control Group	
	N	%	N	%
No worries	14	46.7	10	33.3
Mild anxiety	9	30.0	10	33.3
Moderate anxiety	6	20.0	8	26.7
Severe anxiety	1	3.3	2	6.7
N	30	100%	30	100%

Anxiety also tends to be experienced by pregnant women of old age, because they are worried about whether they can go through the labor process smoothly considering that this age range tends to experience complications. The results of this study are in accordance with research conducted by Zamriati (2013), the results of the chi square statistical test obtained p value = 0.022. It shows that age has a significant relationship with anxiety levels in the face of the period before childbirth. This is in line with the research conducted by Sucipto, 2009 that there is a relationship between age and mental readiness in facing childbirth (Zamriati, 2013)

The results of statistical analysis with the Sperman Rank (Rho) test obtained a value of $r_s = 0.548$ with a probability (p) of 0.0001 with a significance level of 5% (0.05) which can be concluded that there is a significant relationship between age and maternal anxiety level. Age 20-35 years old is considered ready and ideal for pregnancy and childbirth, this age range is a woman's physical condition in prime condition. The uterus has been able to provide maximum protection or conditions for pregnancy and is generally mentally ready so that it has an impact on the behavior of taking care of the pregnancy carefully (Laurensia Yunita, 2013)

Anxiety experienced by the mother includes anxiety about the preparation for labor because it is already in the third trimester so that the mother will be too blamed for her health and worry about the baby's condition. Anxiety arises when a baby is born with physical or spiritual defects, which is caused by mistakes or sins that have been committed in the past. Another condition that increased maternal anxiety during the study was the Covid-19 pandemic, where respondents were in the red zone (Yonne Astri, Irma Nurbaeti, 2009).

b. Bivariate Analysis

To determine the effect of green bean spice juice on hemoglobin levels in adolescent girls in the work area of P Suksesmas, South City, Gorontalo City, this study used a paired T-test with the following results:

Table 3.
Differences in responden Anxiety levels

Intervention Group	Mean	Significant
Anxiety Before Treatment	12.23±7.99	0.000
Anxiety After Treatment	2.63±4.53	
Kelompok Kontrol		
Anxiety Before Treatment	15.63±8.82	0.038
Anxiety After Treatment	11.63±5.22	

Based on the table above, it can be seen that there are differences in anxiety levels before and after treatment in the intervention group and the control group. From the two groups, the average value can be seen that the intervention group has a higher difference in anxiety level score reduction (9.6) than the control group (4.0) with significance values, respectively 0.000 and 0.038 ($\alpha = 0.05$).

The results showed that there were differences in anxiety levels before and after treatment in the intervention group and the control group. The intervention group in this study received treatment in the form of inhaling lemon aromatherapy with a distance of 30 cm from the respondent. After smelled aromatherapy, respondents were asked to relax and inhale aromatherapy for 10 minutes. Respondents are conditioned in a room size of 10-16m² and not much air ventilation. The control group in this study received treatment in the form of assistance using an anxiety education book during pregnancy and prevention of the spread of the COVID-19 virus. The Paired t test results showed differences in anxiety levels before and after treatment in the intervention group and the control group. Of the two groups, the average value can be seen that the intervention group has a higher difference in anxiety level score reduction (9.6) than the control group (4.0).

The results of the Bivariate test also showed that the significant value of the intervention group and the control group had a value of $\alpha < 0.05$, namely 0.000 and 0.038, respectively. so that the research hypothesis obtained is that H_0 is rejected and H_a is accepted. Based on these results, it can be seen that both the intervention group (giving lemon aromatherapy) and the control group (providing health education) have an influence on the anxiety level of pregnant women in the third trimester of the Covid 19 pandemic in the working area of Duingingi Health Center and Puskesmas Kota Barat, Gorontalo City.

The decrease in the level of anxiety in pregnant women in this study, both in the intervention group and in the control group, occurred because of the need for information and direct contact between researchers and research aides, which are needed to provide calm so that pregnant women can relax more in knowing information about Covid 19 in pregnancy (Yonne). Astria, Irma Nurbaeti, 2009).

The tendency to decline in anxiety scores was more dominant in the intervention group compared to the control group due to the relaxation of respondents in the intervention group which had an impact on p muscle flexibility and a positive effect and has a direct effect on the body namely the central nervous system is given by odor molecules contained in essential oils. This positive effect inhibits the production of Adreno Corticotrophic Hormone (ACTH), which is a hormone that causes anxiety in individuals. Meanwhile, the control group who gets information about anxiety education through a guidebook to overcome anxiety in pregnant women only has an indirect effect because understanding is needed. which varies from each respondent. (Dharma, 2018)

Aromatherapy is a therapeutic action using essential oils that are useful for improving physical and psychological conditions so that they become better. Lemon aromatherapy has been shown to have beneficial effects on pregnancy and emesis gravidarum. Lemon aromatherapy is an essential oil produced from citrus peel extract (Citrus Lemon) which is often used in aromatherapy. Lemon aromatherapy is a type of aromatherapy that is safe for pregnancy and childbirth. The results of the paired t-test obtained p-value 0.017 < 0.05, which means that there is an effect of lemon aromatherapy on reducing nausea and vomiting in pregnant women. After giving lemon aromatherapy, most of the respondents said they felt more refreshed, calm and comfortable where

the nausea sensation was no longer felt as strong as before giving lemon aromatherapy. (Rivina Anggraeni Mustikaning Rae, 2016)

According to Anita and Yayuk (2020), the results of research using the Paired t test, it is known that the difference between pre-test and post-test nutrition education using booklet media is the value of $p = 0.000 < \alpha = 0.005$, the conclusion shows that there is an effect of nutrition education for pregnant women using booklet media on Preventive behavior for children under five with stunting in the Undaa Puskesmas, Kudus Regency (Anita et al., 2020)

Education through this anxiety book during the study, pregnant women understand faster and respond well. This can be seen when someone who does not understand immediately asks questions because in the education book anxiety displays pictures to make it more interesting and quickly understood by pregnant women so that they can discuss with each other and researchers. it is easier to apply the message from the book even though the level of education is different and people's understanding is also different, the effect of capturing one's message is also different. According to Janet Pandori's Research, 2018 with the title Use of the MCH Handbook as a Media for Education in Pregnant Women, the results of her research show that the highest percentage of pregnant women knowledge with good categories (53.8%), the attitude of pregnant women with a positive category (59.1%), practice healthy pregnant women with a good category (58.1%), the use of the KIA book in a good category (50.5%) and information from other sources in a good category (65.6%). In conclusion, there is a relationship between the use of the MCH handbook and attitudes ($p = 0.000$) and there is no relationship between the use of the MCH handbook and knowledge ($p = 0.310$), practice ($p = 0.925$) (Janet Padori et.al, 2018)

Supported by Hernina and Sri Prihatini's research, 2015 The results of testing the implementation of nutrition education using the Kadarsi Poster media were made, showing that >70% of the education targets had better nutritional knowledge than before and posyandu cadres were able to convey messages well, as well as extension officers. In conclusion, nutrition education posters that are made are quite simple, easy to understand and universal and effective enough to increase the nutritional knowledge of user mothers and future brides (Hermina, 2015).

This educational anxiety book is very easy for midwives to use because it is designed to be used at any time which contains pictures and information on pregnancy, danger signs for pregnant women, anxiety problems and health education during the Covid 19 pandemic, making it easier for midwives to convey messages. According to the research of Luluk Hidayah et al, 2019 regarding the development of e-book-based health education media, the conclusion is that e-book-based health education media with pregnancy care material developed using pdf (portable document format) is very valid for use in married couples as a good independent learning resource using a computer or Android cellphone that can be used at any time (Luluk Hidayah, Yayuk Norazizah, 2016).

4. Conclusions

There was difference in the level of anxiety of pregnant in the intervention group giving lemon aromatherapy, which decreased 9.6 faster than the control group health education through the book, the decrease was 4.0 in pregnant women in the third trimester of the covid 19 pandemic in the working area of dungingi Health Center and Public health West gorontalo city, so based on the paired test the test show that the significant value of the intervention group and the control group has a value of $\alpha 0.05$, namely 0.000 and 0.038.

For midwives, this research can be used as a reference as counseling skills to educate pregnant women and skills to apply non-pharmacological anxiety reduction techniques through the application of lemon aromatherapy to pregnant women and For pregnant to pay attention to be able to overcome anxiety because it can have a further effect on the continuity of pregnancy and the baby born.

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