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## **The effect of Usada Taru Premana combination with acupressure on immunity in the COVID-19 pandemic (Pesarumana Presada)**

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**Abstract**---Background: One of the popular traditional medicine among the people is Usadha Taru Pramana. Usada Taru Pramana contains the diversity of medicinal plants and their uses in traditional Balinese medicine. Red ginger (*Zingiber officinale*) is one of the types of plants in Taru Pramana's palm which is believed to have the ability to relieve various symptoms of disease and is widely used for the drug industry. So that the absorption of ginger oil compounds can be optimal through pressure on the body's meridian points through the epidermis layer and into the lymph and blood channels, sweat glands, nerves, and enters the bloodstream and goes to every cell of the body to react, thus causing a calming and hypotensive effect that is can reduce heart rate. Methods: This study uses descriptive quantitative data analysis techniques with a Cross Sectional approach. A total of 20 samples consisting of people Results: The results obtained. From the results of the Wilcoxon Signed Ranks Test, a p-value of 0.025 was obtained, which means that there were differences in antibody levels before and after treatment. Conclusion: It can be concluded that the Pesarumana Presada intervention is effective in increasing antibody levels in respondents

**Keywords**---Usada Taru Premana, acupressure, immunity.

## Introduction

The global COVID-19 pandemic has occurred for more than a year but has not shown a decrease in cases, even the virus has mutated (WHO, 2020). The number of Covid-19 cases in Indonesia as of March 16, 2021 was 430,458 cases with the number of deaths due to COVID-19 as many as 38,753 cases (BPBD Regional Disaster Management Agency, 2021). Bali is ranked seventh highest in Indonesia, reaching 37,077 cases with an average addition of 201 cases per day (BPBD Regional Disaster Management Agency, 2021). For groups of people with other health problems such as cardiovascular disease, chronic respiratory disease, diabetes and cancer, if they experience Covid-19 infection, they can experience more serious problems. The best way to prevent this disease is to maintain a stable immune system. The immune system helps the body to prevent infections (viruses). The best way to prevent this disease is to maintain a stable immune system. The immune system helps the body to prevent infections (viruses, bacteria, and fungi) and produces antibodies (immunoglobulins) so that humans can survive disease attacks (Amalia, L., & Hiola, 2020). Maintaining the body's immunity during the pandemic can be done one of them by taking multivitamins, but if you consume it for a long time, it will certainly cause concern and have an impact on treatment. In response to these problems, the government has begun to seek various strategies to prevent Covid-19, one of which is the traditional therapeutic approach. Traditional medicine is directed at strengthening the immune system (Work Team of the Ministry of Home Affairs, 2013). Traditional medicine is easily absorbed and accepted by the community because it has minimal side effects and is environmentally friendly. (Ministry of Health RI Director General of P2P, 2020) In accordance with Government Regulation No. 103 of 2014, and the 2019 Governor's Regulation concerning Traditional Health Services, local wisdom of usada herbs has the potential to participate in contributing to the world of health. One of the popular traditional medicine among the people is Usadha Taru Pramana. Usada Taru Pramana contains the diversity of medicinal plant species and their use in traditional Balinese medicine (Redi Aryanta, 2019). Red ginger (*Zingiber officinale*) is one of the types of plants in Taru Pramana's palm which is believed to have the ability to relieve various symptoms of disease and is widely used for the drug industry (Work Team of the Ministry of Home Affairs, 2013). Study by Magzoub, 2020, red ginger has been shown to increase the body's immunity, increase IgM levels and reduce circulation of proinflammatory cytokines (Dewi & Riyandari, 2020).

Processed ginger in traditional medicine can be utilized in the form of ingredients or ginger oil. The use of red ginger oil in complementary therapy is often combined in medicine as a massage medium or acupressure. So that the absorption of ginger oil compounds can be optimal through pressure on the body's meridian points through the epidermis layer and into the lymph and blood channels, sweat glands, nerves, and enters the bloodstream and goes to every cell of the body to react, thus causing a calming and hypotensive effect that is can reduce heart rate (Price, 2006). Acupressure is an emphasis on the meridian points of the body using the index/thumb to stimulate the flow of energy in the meridians (Sukanta, 2009). The preliminary study that the researcher has done is dry cupping therapy combined with acupressure where the results of the study show a significant effect on lowering blood pressure, with a systolic p-value of

0.007 and a diastolic p-value of  $0.000 < 0.05$  (Candrawati & Andini, 2021). Based on this background, researchers are interested in conducting research on the effect of Usada Taru Pramana ginger drink and ginger oil in combination with acupressure therapy as an alternative therapy to improve the community's immune system.

## Research Methods

This research was carried out using this research method using quantitative descriptive data analysis techniques with a Cross Sectional approach to 20 samples by conducting a Covid-19 serology examination before and after the intervention, namely acupressure and ginger concoction

## Results and Discussion

Based on the results of this study has been carried out, it is found that there is a relationship between usada taru premana combination of acupressure and increasing antibody levels, it can be seen in table 1-4.

### 1. Characteristics of Research Respondents

Table 1. Characteristics of Research Respondents

No	Characteristics	Frequency (f)	Percentage (f)
1	Age		
	Early adulthood (26-35 years)	3	15
	Late adulthood (36-45 years)	5	25
	Early elderly (46-55 years)	7	35
	Late elderly (56-65 years)	5	25
	Amount	20	100
2	Gender		
	Man	16	80
	Woman	4	20
	Amount	20	100

Based on table 1, it can be seen that most of the respondents aged 46-55 years are included in the category of early elderly, namely 7 respondents (35%) and based on gender, most of the respondents are male, namely 16 respondents (80%).

### 2. Results of Immunity Examination with Quantitative Covid-19 Serology before being given Usada Taru Premana Acupressure Combination Therapy in the Community during the Covid-19 Pandemic Period

Table 2. Results of the Covid-19 Serological Immunity Examination Before Intervention is Given to the Community during the Covid-19 Pandemic Period in 2021

Immunity Results	Test	Frequency (f)	Percent age (%)	Valid percent	Cumulative Percent
Negative <0,8		5	25,00	25,00	25,00
Positive ≥0,8		15	75,00	75,00	100,00
Amount		20	100	100	

Based on table 2, the results of the Covid-19 serologic immunity examination were obtained before the intervention was given, if seen from the frequency table, it can be seen that the antibody pretest was not yet formed or negative with a cut off <0.8 as many as 5 respondents (25%) and the antibody pretest was formed or positive with a cut off of 0.8 as many as 15 respondents (75%).

Immunity is an important capital for the body so that a person can avoid infection with the COVID-19 virus, especially when people have to undergo activities outside the home. The immune system or immune system is able to produce antibodies that can protect the body from infection with viruses, bacteria or other pathogens, but if a person has a weak immune system, then his or her immune system is not strong enough to fight infection so that a person becomes susceptible to disease (Chowdhury). et al in Aristia B.F, et al, 2020).

Maintaining the body's immunity during a pandemic can be done, one of which is by consuming multivitamins that can help maintain stamina, but if you consume it for a long time it will certainly cause concern and have an impact on treatment. In response to these problems, the government has begun to seek various strategies to prevent Covid-19, one of which is the traditional therapeutic approach

### 3. Results of Immunity Examination with Quantitative Covid-19 Serology after being given Usada Taru Premana Acupressure Combination Therapy in the Community during the Covid-19 Pandemic

Table 3. Results of the Covid-19 Serological Immunity Examination After Intervention was Given to the Community during the Covid-19 Pandemic Period in 2021

Immunity Examination Results	Frequency (f)	Percent age (%)	Valid percent	Cumulative percent
Negative <0,8	-	-	-	-
Positive ≥0,8	20	100,00	100,00	100,00
Amount	20	100	100	

Based on table 3, the results of the serologic examination of the quantity of Covid-19 immunity after the intervention were given, if seen from the frequency table, it

can be seen that in the posttest antibody 20 respondents (100%) the antibodies became positive.

Maintaining immunity during the pandemic can be carried out by various Covid-19 prevention strategies, one of which is the traditional therapeutic approach that is popular among the public, namely Usadha Taru Pramana. This treatment contains various types of medicinal plants and their use in traditional Balinese medicine (Redi Aryanta, 2019). Red ginger (*Zingiber officinale*) is one of the types of plants in Taru Pramana's palm which is believed to have the ability to relieve various symptoms of disease and is widely used for the pharmaceutical industry (Work Team of the Ministry of Home Affairs, 2013).

Study by Magzoub, 2020, red ginger has been shown to increase body immunity, increase IgM levels and reduce circulation of proinflammatory cytokines (Dewi & Riyandari, 2020). Ginger belongs to the Zingiberaceae family and has been widely used as traditional medicine in various countries, especially Indonesia, China and Malaysia. Ginger has strong antioxidant properties and is able to reduce and prevent the formation of free radicals and has been considered a safe herbal medicine with very minimal side effects as a result of its antioxidant activity (Ali et al in Aristia, B.F, 2020). In addition, treatment with acupuncture techniques also helps in increasing endurance, acupuncture can activate and activate the release of serotonin which functions as a neurotransmitter that carries stimulation signals to the brain stem which can activate glands in the nervous system and stimulate the pituitary gland to produce hormones - endorphins, hormones - endorphins are chemical compounds that have a comfortable effect and increase immunity, help relieve muscles and relax the body, the function of the -endorphin hormone is to trigger poor blood circulation and activate organs that have problems then blood circulation through.

#### 4. Results of Analysis of the Effect of Usada Taru Premana Combination of Acupressure on Immunity during the Covid-19 Pandemic

Table 4. Results of Analysis of the Effect of Usada Taru Premana Combination of Acupressure on Immunity during the Covid-19 Pandemic

Immunity Examination Results	Frequency (f)	Percentage (%)	P Value
<i>Pretest</i>			
Negative <0,8	5	25,00	0.025
Positive ≥0,8	15	75,00	
<i>Posttest</i>			
Negative <0,8	-	-	0.025
Positive ≥0,8	20	100,00	
Total	20	100	

Based on table 4, the results of the Wilcoxon Signed Ranks Test obtained a p-value of 0.025, which means that there are differences in antibody levels before and after treatment. So it can be concluded that the Pesarumana Presada intervention was effective in increasing antibody levels in respondents.

This explains that the traditional Usada Taru Premana treatment combined with acupressure is able to increase immunity during the COVID-19 pandemic. The content of red ginger has many advantages compared to other types, especially when viewed in terms of the content of chemical compounds in the rhizome. Red ginger is able to inhibit or modulate chemotaxis processes or regulate natural immune activity in response to infection, besides that red ginger is also effective in suppressing the formation of reactive oxygen species production and destroying pathogens (bacteria or viruses) that cause infection (Panjaitan et al, 2012).

Red ginger has excellent anti-viral properties and treats respiratory problems which are one of the signs and symptoms of covid 19 virus infection. The compounds in red ginger are reported to have antibacterial, antioxidant, anti-inflammatory, analgesic, diuretic, antifungal, anticancer, and antiviral properties. (Kaushik et al, 2020; Ukeh et al, 2009) in red ginger has been shown to increase the body's immunity, increase IgM levels and reduce circulation of proinflammatory cytokines (Dewi & Riyandari, 2020). In general, the corona virus has symptoms of inflammation in the lungs, with anti-inflammatory activity and immunomodulatory effects in red ginger that can relieve symptoms or as an alternative in preventing disease or viruses from entering the body. Research by (Dewi & Riyandari, 2020) said that in Sudan, people began to consume ginger drinks as an effort to maintain immunity to prevent COVID-19 by dissolving 12 grams of red ginger powder in 250 ml of warm water three times a day. This dose is doubled if it is intended to treat COVID-19.

In addition, treatment with acupressure techniques also helps in increasing endurance, acupressure can stimulate and activate the release of serotonin which functions as a neurotransmitter that carries stimulation signals to the brain stem which can activate glands in the nervous system and stimulate the pituitary gland to produce -endorphins, hormones -endorphin is a chemical compound that has a comfortable effect and increases immunity, helps relieve muscle tension and relaxes the body, the function of the -endorphin hormone is to improve poor blood circulation and activate problematic organs and then smooth blood circulation throughout the body.

## **Conclusion**

1. The value of immunity before being given usada taru premana combination of antibody acupressure that has not been formed or is negative with a cut off of  $< 0.8$  as many as 5 respondents (25%) and an antibody pretest that has been formed or positive with a cut off of 0.8 as many as 15 respondents (75%).
2. The value of immunity after being given usada taru premana combination of acupressure as many as 20 respondents (100%) became positive for antibodies.
3. Based on the results of the Wilcoxon Signed Ranks Test, a p-value of 0.025 was obtained, which means that there is an effect of the usada taru premana combination of acupressure on immunity during the COVID-19 pandemic seen from the difference in antibody levels before and after treatment.

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