

**EFFECTIVENESS OF MENEY EXTRACT (TURMERIC HONEY) TO DECREASE
OF UPPER RESPIRATORY TRACT INFECTION IN
AGE 4-5 YEARS IN THE COASTAL AREA
SOUTH SURABAYA**

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Abstract

Many toddler having a cold and cough which can heal by giving a turmeric honey extract. The purpose of research is knowing about effectiveness of turmeric and honey extract to discrease upper respiratory tract infection in age 4-5 in the coastal area south Surabaya. Research used true experimental with non equivalentcontrol group design type. The population were 32 toddler respondens. With sampel random sampling were 30 toddler respondens divided into control group and experimental group. The instrument used SOP and URTI questionnaire in toddler, and analized by Wilcoxon and Mannwhitney test. The Result showed experimental group obtained URTI grievance decreased in 5 days, while in control group no decrease was obtained. Wilcoxon test showed turmeric and honey extract effectived in experimental group $p = 0,002$, Wilcoxon test in control group showed there was $p = 0,157$. Mann whitney test showed contradiction in both group $p = 0,001$ ($p < a = 0.05$). Turmeric honey extract is needed by toddler who have URTI, so it can decrease URTI grievance and increase toddler immunity

Keyword: Toddler, Turmeric Honey Extract, URTI

INTRODUCTION

A healthy child is the dream of all parents, but not all children are in good health. Health problems that occur in childhood can affect the child's growth process, especially if the disorder occurs in the respiratory tract such as Upper Respiratory Tract Infection. that is an infection that attacks one part / more from the nasal passages to the alveoli including adnexa (sinus, middle ear cavity, pleura) (Kemenkes RI, 2012). Upper Respiratory Tract Infection until now is still a serious problem for the government and Indonesian people, especially children. Observations of researchers in the village of South Krembangan Surabaya many children under five suffer from respiratory infection which every two months have a recurrence so many mothers think of it as a normal or common thing.

United Nations International Children's Emergency Fund (UNICEF) and World Health Organization (WHO) in 2008 has reported that Upper Respiratory Tract Infection is the leading cause of death in humans compared with the number of deaths from AIDS, malaria and measles. URTI causes more than two million children die each year, predominantly toddlers aged one to four years. Infant mortality cases are entirely from the age of one to five years. Riskesdes 2013 results are five provinces with the highest URTI is East Nusa Tenggara (41.7%), Papua (31.1%), Aceh (30.0%), West Nusa Tenggara (28.3%) and East Java (28.3%). URTI is also on the list of 10 most diseases in the Hospital. Data from hospitalization in hospitals throughout Indonesia in 2009 URTI ranks seven with 36,048 cases (Ministry of Health RI, 2010). The result of

introduction study at Puskesmas Krembangan Selatan Surabaya in 2016 was 1700 children suffering from URTI. Parents from the Coastal Communities of Krembangan Selatan Village Surabaya many use turmeric to lower URTI. Turmeric for one segment of finger grated and then squeezed then the juice drinking water to a toddler who had a cough.

Many factors that contribute to the incidence of URTI in children, including the immune system is still low so susceptible to infectious diseases. In addition, environmental factors also affect the environment are not clean, a lot of pollution, less house ventilation, home density, air pollution. Air pollution against the respiratory tract can cause the cilia nose movement to be slow and even stiff can stop so that it can not clean the respiratory tract due to irritation by the contaminants. The production of mucus will increase, causing narrowing of the respiratory tract and destruction of bacterial killer cells in the respiratory tract. As a result of this will cause difficulty breathing. So that foreign objects are attracted and other bacteria can not be removed from the respiratory tract, this will facilitate the occurrence of respiratory infections. Respiratory tract infections are mostly mild as cough and cold do not require treatment with antibiotics (Koes Irianto, 2015).

The role of nurses in children who have experienced respiratory problems can be done by providing nursing care traditional medicine. Traditional medicine has been widely accepted almost all countries in the world, in Africa, Asia and Latin America are using herbal remedies as a complement to the primary treatment they receive (Ramadhani et al, 2014). One of the traditional materials used for the treatment of URTI is Meney extract (Turmeric Honey). Honey contains antibiotic substances that are active against the attacks of various pathogens causing disease. Infectious diseases caused by pathogenic bacteria include: acute

respiratory infection, cough, fever can be prevented and cured by drinking honey on a regular basis (Aden, 2010). The content of honey is able to fight bacteria and viruses in the human body is believed as a good nutritional intake and nutrients for the human body. According to research Cohen et al (2012) honey can be given to children with upper respiratory infections to reduce the frequency of cough and difficulty sleeping.

While turmeric has an essential oil content which is an active substance that can cure cough (Latief, 2012). The purpose of this study is to know the effectiveness of Meney Extract (Turmeric Honey) on URTI Reduction in Age 4-5 in Coastal Area South Krembangan Surabaya.

RESEARCH METHODS

This research design used quasi experimental design with Non Equivalent Control Group Design. The design aims to compare the results obtained before and after treatment. The intervention group was given treatment of Meney (Turmeric Honey), while the control group was not given, it was advisable to consume high nutritious food to keep the environment clean, adequate rest. In both groups starting with pre test, and after the treatment was held back measurement (post test). Criteria for inclusion of new infants coughing colds, toddlers who cough colds no more than 2 days, no coexisting diseases such as ulcers, shortness of breath, gastritis, have not received or not in the process of medical treatment such as antibiotics, age 4-5 years. Data were analyzed using Wilcoxon dan Mann Whitney test with significant degree $p \leq 0,05$.

RESULTS AND DISCUSSION

1. SPECIFIC DATA

- a. Treatment Group Before and After Giving Meney Extract (Turmeric Honey).

Treatment group

CRITERIA	Pre		Post	
	F	P(%)	F	P(%)
No complain	0	0%	0	0%
Mild	0	0%	12	80,0%
Moderate	0	0%	3	20,0%
Severe	11	73,3%	0	0%
Very Severe	4	26,7%	0	0%
Total	15	100%	15	100%
Uji Wilcoxon p=0,002				

This table showed that URTI complaints in the treatment group before Meney extract contributed severe complaints of 11 balita (73.3%), contributed very severe complaints of 4 infants (26.7%). After being given Meney extract contribute to mild and moderate increase, which experienced mild complaints as many as 12 balita (80.0%), and who suffered moderate complaint of 3 balita (20,0%). Based on statistical test with Wilcoxon test indicated that $p = 0,002 \leq \alpha = 0,05$ then decision is H_0 rejected and H_1 accepted which mean Meney extract (Turmeric Honey) effective to decrease of URTI complaints in children aged 4-5 years in Coastal Area Krembangan of South Surabaya Research Department of Pediatrics in America states honey is one of the traditional remedies that are superior to symptoms of URTI, such as can reduce the severity of cough and can improve the quality of child's sleep at night. Antibiotic substances contained in honey can cure some infectious diseases such as a child's cough in the URTI (Ramadhani, et al 2014). The content of honey are antibacterial that can fight inflammatory microbacterial causes, even honey can kill bacteria that cause infection in the throat (Yuliarti, 2015). Turmeric containing 3% essential oil is an active substance that can cure cough. Meney extract (Turmeric Honey) regularly, can improve the immune system, soothe the throat and have antioxidant properties and increase the release of cytokines that can kill antimicrobial (Paul, et al. 2007).

b. Control Group

CRITERIA	Control Group			
	Pre		Post	
	F	P(%)	F	P(%)
No	0	0%	0	0%
complain	0	0%	0	0%
Mild	0	0%	3	20,0%
Moderate	12	80,0%	10	66,7%
Severe	3	20,0%	2	13,3%
Very Severe				
Total	15	100%	15	100%
Uji Wilcoxon p = 0,157				

That table showed that URTI complaints in the control group were obtained during pre-test with severe complaints of 3 people (20.0%), and severe complaints of 12 people (80.0%). After the last post test was done on the control group who suffered severe complaints as many as 2 people (13.3%), who suffered severe complaints as many as 10 people (66.7%), and those who experienced moderate complaints of 3 people (20.0%). Based on statistical test with Wilcoxon test shows that $p = 0,157 \geq \alpha = 0,05$, H_0 is accepted, H_1 is rejected meaning it statistically show no significant change.

Some of the factors that are thought to contribute to URTI occurrence in children are low intake of antioxidants, poor nutritional status and poor environmental sanitation (Irianto, 2015). Honey contains many properties including as a source of antioxidants, sources of nutrients and energy, and as a source of vitamins and minerals (Sakri, 2015). Turmeric has many chemical content of one of the essential oils that can reduce the complaints of cough. Turmeric also contains active substance caffeic acid that can stimulate the spirit, fresheners, reduce fatigue, anti-inflammatory, anti-seizure and antioxidants (Winarto, 2013). According to the assumption that children with cold cough are caused by decreased immune system, lack of good nutritional intake and poor environmental sanitation. From the control group data on pre test that

experienced severe complaints as much as 3 people, and who experienced severe complaints as many as 12 people. After the end of the post-test that suffered severe complaints as much as 2 people, who suffered severe complaints as many as 10 people and who have complaints are as many as 3 people. Changes that occur can be caused by the child's immune system is getting better and nutrition enough nutrition so that there is a change even without the Meney extract (Turmeric Honey). Provision of good nutrition can boost the immune system in children and nutrition as one of the important components in supporting the sustainability of growth and development process. Without giving Meney extract (Turmeric Honey) in the control group is suggested in the parents of children under five to provide good nutrition, maintaining environmental health and if the cough gets worse immediately taken medical treatment or doctor.

c. Effectiveness of Meney Extract (Turmeric Honey) on Reduced Complaint of URTI at Toddler Age 4-5 years in Coastal Area Krembangan South Surabaya.

CRITERIA	Treatment group		Control group	
	Post		Post	
	F	P(%)	F	P(%)
No complain	0	0%	0	0%
Mild	12	80,0%	0	0%
Moderate	3	20,0%	3	20,0%
Severe	0	0%	10	66,7%
Very Severe	0	0%	2	13,3%
Total	15	100%	15	100%

Mann Whitney Test p = 0,001

That table showed the effectiveness of Meney extract in the treatment group which experienced mild complaints of 12 infants (80.0%) and those who experienced moderate complaints of 3 infants (20, 0%). In the control group that was not given Meney extract (Turmeric Honey) contributed no increase, which experienced severe complaints as many as 2 people (13.3%), who suffered severe

complaints as many as 10 people (66.7) As many as 3 people (20.0%). The statistic test used in both treatment and control group uses Mann Whitney Test obtained p = 0,001, where p value <0,05 mean there is difference in treatment group and control group of Meney extract (Turmeric Honey) to decrease of URTI In children aged 4-5 years in the Coastal Area Krembangan of South Surabaya. This is in line with research conducted by Yulfina (2011) about the effectiveness of ginger to decrease the severity of cough in children with URTI in Puskesmas Lima Puluh Pekanbaru with p value = 0.001 or p <α (0.05) than H0 rejected means Ginger drinking is effective to reduce the severity of cough. Ginger has an essential oil of about 3% equal to turmeric containing 3% essential oil which is an active substance that can cure cough.

This research is also supported in the research of Peter C. Molan (1992), researcher at the Department of Biological Sciences, University of Waikoto, Hamilton, New Zealand, proved that honey contains antibiotics that are active against the attacks of various pathogen-causing diseases.

Some infectious diseases that can be cured and inhibited by eating honey regularly include cough, fever, heart disease, liver disorders, lungs, diseases that can interfere with the function of the eyes, nerves and ears, plus upper respiratory track infections (URTI).

Meney (Turmeric Honey) can decrease the complaint of URTI in children, because the essential oil content of turmeric is an active substance that can cure cough (Winarto, 2013), while antibiotic substance in honey that can cure some infectious diseases such as cough, fever, Sore throat (Sakri, 2015). Given 2x a day for 5 days for children who have URTI with cough severity such as cough with phlegm, runny nose, no appetite and other symptoms become reduced. This study can be concluded that the provision of Meney extract (Turmeric Honey)

effective against the decrease of URTI complaints in children aged 4-5 years in the Coastal Area Krembangan of South Surabaya.

CONCLUSION

1. Toddlers in the treatment group experienced a change of weight - weight average.
2. Toddlers in the control group did not experience significant changes in weight - to -weight average.
3. Meney extract (Turmeric Honey) is effective against the decrease of URTI complaints in children aged 4-5 years in Coastal Area Krembangan of South Surabaya.

SUGGESTION

1. For Respondents.
Parents should be aware of the importance of maintaining the primary health of the respiratory system. Toddlers who have a cough more than one day are advised parents to be taken medical treatment. Using Meney extract (Turmeric Honey) for alternative medicine for mild URTI.
2. For Nursing Professions.
Providing health education to the public about the dangers of URTI and preventing URTI. Selecting respondents in the control group with mild URTI complaints.
3. On the next researcher
It is advisable to continue this research with the topic of turmeric and milk effect on the decrease of URTI complaints in children aged 1-2 years. First do the laboratory test about the size that fits in turmeric.

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