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The Effectiveness of Acupressure and Common Cold Massage on Healing Cold in Infants

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ABSTRACT

Acute respiratory infection (ARI) is a common disease that affects the community, particularly children and infants. Acute respiratory infections (ARI) that occur in children and infants are very dangerous because they can interfere with eating and sometimes lead to more serious lower respiratory tract infections if not treated properly. Acupressure and common cold massage are non-pharmacological methods of cough and cold treatment. A preliminary study was conducted in the working area of the Balapulang Health Center on September 7, 2021, and a total of 200 babies were obtained. Knowing the effectiveness of acupressure and common cold massage on the duration of cough and cold healing at the Balapulang Public Health Center. A quasi-experimental design with a two group posttest design with a sample size of 20 babies. There is a difference in the effectiveness of acupressure and common cold massage on the duration of cough and cold healing, as indicated by the mean rank values of the acupressure group of 14.05 and the common cold massage group of 6.95. Common cold massage is more effective than acupressure On the healing time of cough and cold in babies with a p-value of 0.005.

Keywords: acupressure; common cold massage; cough and cold

Introduction

The common cold, which is also called acute respiratory infection (ARI), is a primary infection in the nasopharynx and nose, which often secrete fluid, this disease is often found in infants and children. ISPA infection is one of the most common diseases that affects people, especially children and infants [1]. This is because children and infants do not have a perfect immune system. ISPA is classified into three, categories: severe pneumonia, pneumonia, and not pneumonia. Cold cough as a type of ARI, namely ARI, is not non-pneumonic in children and infants if left untreated, it can become pneumonia, which is one of the causes of child and infant mortality [2].

Acute Respiratory Infection Disease is the most common cause of visits for treatment at the health center, namely as many as 40% -60% and

15% -30% of visits for treatment in the outpatient and inpatient departments of the hospital. Children and infants in Indonesia are estimated to experience bouts of cold cough 3-6 times per year. The World Health Organization explained in 2018 that the incidence of Acute Respiratory Infection (ARI) in developing countries is 15% -20% per year in children and infants. The results of the 2018 Household Health Survey (SKRT) show that ARI has the third highest morbidity rate, namely 24%, while the ARI morbidity rate in Central Java Province is 21% [3].

Acute respiratory infection (ARI) in children and infants is extremely dangerous because it can disrupt feeding and lead to more serious lower respiratory tract infections if not treated properly [4]. There are pharmacological and non-pharmacological methods for treating a cold cough in infants. The pharmacological method is by

consuming drugs, where there are some disadvantages that can be experienced, such as the risk of side effects to the baby's digestive tract, the increased risk of bacterial resistance to the antibiotics consumed, and expensive medical costs. Non-pharmacological methods that can be used to treat cold coughs include aromatherapy, massage, onion extract, acupressure, and common cold massage [5].

Acupressure is a complementary therapy that is carried out by stimulating certain points by pressing on the surface of the body using fingers or blunt objects for fitness purposes or to help overcome health problems. Common cold massage is a complementary therapy that is done by massaging several parts of the body (face, chest, hands, and feet), which is useful for reducing muscle tension, improving blood and oxygen circulation [5].

Research conducted by Handayani explains that reflexology is effective in reducing complaints of cold coughs, with an average healing time of 7.2 days. Another study conducted by Helen Martina MA, Hepzibah Beulah & Anita David (2015) in the pediatric ward at Sri Ramachandra Hospital, Chennai, showed that massage therapy was significantly effective in improving lung function [6].

The preliminary study was conducted on September 7, 2021, in the Balapulung Health Center working area, where there were 200 babies. The results of interviews with 8 mothers of patients who visited the Balapulung Health Center showed that 4 mothers said they would immediately check their children into a health facility (midwife, doctor, or health center) if their child had a cough and runny nose, 2 mothers said their child would be treated by sunbathing in the morning, and 2 mothers gave warm to the baby using eucalyptus oil or telon oil while being massaged or "sorted". The results of interviews with the midwife on duty at the Balapulung Health Center in the Integrated

Management of Sick Infants (MTBS), if there is a baby with a diagnosis of the common cold, then in addition to giving medicine, the midwife also provides education about the treatment of the common cold, including suggestions that babies be given more mother's milk, covered with shallots, gently massaging the baby, and using family medicinal plants (TOGA). This study aims to analyze the effectiveness of acupressure and common cold massage on the healing time of cold coughs in infants at the Balapulung Health Center.

Methods

Quantitative research with quasi-experiment design using post-test only two group design. The population in this study were 61 infants. A total of 20 infants aged 6-12 months who had cold coughs on days 1-2 were selected by purposive sampling. The research was conducted in the MTBS room of Balapulung Health Center from May 2021 to March 2022. The inclusion criteria in this study were the baby's parents agreeing that their baby would be a respondent, babies who had coughs and colds on day 1-2, babies who only received medicine from the Community Health Center. The research instrument used acupressure standard operating procedures (SOP), Common Cold Massage standard operating procedures, and observation sheets for the duration of cold cough healing. The healing time was calculated from the start of the intervention to the disappearance of the cold cough and the absence of the following symptoms: fever, sneezing, nasal congestion, and chest retraction during inspiration and expiration. The data were analyzed using Mann Whitney.

This research was conducted by paying attention to the basic principles of research ethics of autonomy, beneficence, non-maleficence, anonymity, and justice and has passed an ethical review with decree number 0096/KEP/UNKAHA/LPPM/XII/2021.

Results and Discussion

Table 1. The Healing Duration of Cold Cough in Infants After Given Acupressure and Common Cold Massage at the Balapulung Health Center

Group	Mean±SD	Min-Max	Mean Rank	P value
acupressure	8.20±0.919	7-10	6.95	0.005
Common cold massage	6.70±0.949	6-8	14.05	

The healing duration of cold coughs in infants after given acupressure and common cold massage at the Balapulung Health Center.

Table 1 shows the healing time for cold coughs in infants after being given acupressure at the Balapulung Health Center. The average recovery is 8 days, the fastest recovery is 7 days, and

the longest recovery is 10 days. Meanwhile, the average healing time for cold coughs in babies after receiving a common cold massage is 7 days, with the fastest being 6 days and the longest being 8 days.

The results of bivariate analysis using Man Whitney showed that the duration of healing of cold coughs in infants who were given acupressure, had a mean rank value of 14.05. The duration of healing of cold coughs in infants who were given common cold massage, had a mean rank value of 6.95, which was smaller than the mean rank value in the acupressure treatment group. These results indicate that there is a difference in the duration of cold cough healing in infants who are given acupressure versus common cold massage. Based on the results of the bivariate statistical test, the P value was 0.005 (<0.05). Then H_a is accepted, which means that there is a significant difference in the healing time for cold coughs in infants who are given acupressure and common cold massage, where common cold massage is more effective than acupressure.

The results showed that the average cold cough recovery in infants after being given acupressure was 8 days, the fastest recovery was 7 days, and the longest was 10 days with a mean rank value of 14.05. Ancient Chinese medicine mentions that the factors that cause cold coughs are the influences of changing seasons, such as wind, cold, heat, humidity, dryness, and excessive fire. Internal factors are feelings of sadness and joy, as well as family and environmental factors.

This study supports the findings of Handayani P, et al. (2020) in their study *The Effect of the Acupressure Method on Common Cold in Infants Aged 6-12 Months in Binjai City*, which found that reflexology is effective in reducing complaints of cold coughs with an average length of time (duration) of healing of 7.2 days [7].

This research is in line with the theoretical concept put forward by Loo M in *Pediatric Acupuncture*, that acupressure for children from the neonatal stage to the age of 4 years improves children physically, mentally, and spiritually. Physically, it makes them healthier and encourages better growth, speeding up the healing process for colds and coughs. Mentally, the child develops better sleep patterns, and his mood becomes more stable. Spiritually, children become more intuitive, learn faster, and are able to give better attention [8]

The results of the researchers' observations on respondents who received acupressure treatment showed that healing time was influenced by external factors, namely cold, wind, and weather changes. A cold cough is a viral infection that can attack the

upper respiratory tract (nose to throat) and cause symptoms of runny nose (snot), congestion, and cough, often accompanied by fever and headache. Coughing and colds are more common when the weather changes. Weather changes will affect the air temperature. From the explanation above, researchers can conclude that acupressure can be used in conjunction with the treatment of cold coughs in infants [9].

The duration of healing for a cold cough in infants after being given a common cold massage at the Balapulang Health Center. The duration of healing for cold coughs in infants after being given the common cold was the shortest 6 days and the longest 8 days, according to the researchers' findings, with a mean rank value of 6.90. One of the infectious diseases whose incidence is quite frequent both in the world and in Indonesia is the common cold. The common cold, which is also called acute respiratory infection (ARI), is a primary infection in the nasopharynx and nose that often secretes fluid. This disease is often found in infants and children.

Pediatric massage therapy is defined as the manual manipulation of soft tissues to promote health and well-being in children with varying pressure, speed, and technique according to need. When giving massage therapy, the speed of pressure must be adjusted to its purpose because certain body parts cannot be massaged or must be massaged at high speed or repeated [10].

This research is in line with research conducted by Helen Martina MA, Hepzibah Beulah & Anita David (2015) regarding the effectiveness of massage therapy on respiratory status among toddlers with lower respiratory tract infection in the pediatric ward at Sri Ramachandra Hospital, Chennai. significantly effective in improving lung function, assessed from breathing, with a P value of 0.001 ($P < 0.05$) [6].

Common cold massage is a form of therapy that uses a systematic gentle touch, which is focused on a particular body part, or as a whole, with the aim of healing and relaxation. In this study it was produced that common cold massage was effective in the healing process of cold coughs in infants.

The difference in healing time for cold coughs in infants who were given acupressure and common cold massage at the Balapulang Health Center, in this study the mean rank values for the acupressure group were 14.05 and common cold massage were 6.90, meaning that the healing time for cold coughs in the common cold massage group was faster than acupressure group.

Acupressure is an effective therapy for pediatric procedural pain, infantile colic, juvenile pelvic pain, and headaches under specific intervention methods. It is differences in the application of acupuncture that will result in variability in the effectiveness of treatment; not the acupuncture intervention itself. However, studies using similar intervention methods for the same conditions show consistency in results [11].

Acupuncture has become an increasingly evident part of the health system in society. There is increasing interest in using acupuncture and related techniques for pediatric pain management. In the case of a cold cough, a touch of acupressure is needed to relieve symptoms and even treat a cold cough. A cold cough will cause a headache in the baby, which allows the baby to experience fussiness. Investigators analyzing the further need for further extensive research to evaluate the value of integrating acupuncture in pediatric pain management are urgently needed and highly recommended [12].

The common cold has previously been defined as a viral upper respiratory tract infection with a collection of symptoms including runny nose, postnasal drip, cough, congestion, headache, body aches, and pharyngitis (sore throat), but rarely a high fever. It is considered the most common acute disease worldwide [13].

Protein-energy and micronutrients play an important role in the development and maturation of innate and adaptive immunity; micronutrient deficiencies in vitamins A, D, and E as well as the minerals zinc, selenium, and iron can lead to immunosuppression and susceptibility to infection [14]. Malnutrition is considered a major cause of immune deficiency worldwide, with micronutrient deficiencies affecting growth, intellectual development, infant and child mortality, and susceptibility to infection. The explanation above prompted the researchers to conclude that cold coughs in children are closely related to the nutrition that babies get. lack of nutrition as a cause of a decreased child's immune system, which is very likely to occur when coughing up colds. However, the weakness in this study was not exploring nutritional intake, especially before and during a common cold [15].

This study shows that common cold massage is more effective than acupressure. The healing time of common cold massage is relatively faster than acupressure for cases of coughs and colds in children.

One of the programs that has been carried out at the Puskesmas to tackle ISPA is the integrated management approach for sick toddlers (IMCI). MTBS is an integrated approach to the management of sick toddlers, with a focus on the overall health of children aged 0-59 months. MTBS is not a health program but an approach/method of managing sick toddlers. The World Health Organization (WHO) has recognized that the IMCI approach is very suitable for application in developing countries in an effort to reduce mortality, morbidity, and disability in infants and toddlers [16].

Acute respiratory infection management has started to be effective, where toddlers treated with the IMCI approach increased clinically by 60% compared to the non-IMCI approach, namely 12%. MTBS is an approach implemented to tackle ISPA that begins with assessing and classifying sick children, determining action and treatment, counseling for mothers and home care (follow-up). In implementing IMCI, health workers are carried out by cadres who have received training as executors, namely doctors, midwives and nurses. In relation to the results of this study, common cold massage can be applied to complement a series of pharmacological treatments so that it can accelerate the healing of coughs and colds in toddlers.

Pediatric massage therapy common cold has proven to be very effective for children suffering from asthma, coughs and colds, constipation and abdominal colic as well as premature babies. Children who suffer from a prolonged common cold cough and whose mucus is very thick cannot be recovered sufficiently with oral medication. To support the child's healing process, chest therapy can be done. Massage has several positive effects in terms of weight gain, better sleep patterns, increased neuromotor development, better emotional bonds, reduced rates of nosocomial infections, one of which is the common cold.

Conclusion

The conclusions in this study are; the average duration of healing a cold cough in infants after being given an acupressure massage is 8 days. The duration of healing for a cold cough in infants after being given a common cold massage is 7 days. There is a difference in the effectiveness of acupressure and common cold massage on the healing time for cold coughs in infants, where common cold massage is more effective in

accelerating the healing time for cold coughs in infants.

The suggestions in this study are that the community is expected to increase its knowledge about handling toddlers who experience cold coughs with massage and acupressure. Midwives are expected to improve their skills in common cold massage and acupressure and apply them in midwifery care for babies with the common cold. Future researchers are expected to carry out further research on the duration of healing of the common cold by increasing the number of respondents and paying attention to factors that influence the healing of other common colds, such as nutritional intake.

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