

## CASE STUDY: COMPLEMENTARY THERAPY TO INCREASE APPETITE IN STUNTED TODDLERS IN BANJARNEGARA DISTRICT

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### ABSTRACT

Toddlers aged 1 - 5 years are a critical period, due to the accelerated growth and development of babies during this golden period. Efforts to deal with the problem of stunting in the form of supplementary feeding. In the problem of appetite disorders and frequency of eating, complementary therapy is given to increase appetite and frequency of eating. The purpose of this study was to determine the impact of providing complementary care with an increase in the increase in appetite of stunted toddlers.

The method used in this research is a case study. The population in this study were stunted toddlers aged 3-5 years. The sample size in this study was 45 respondents who were given complementary care for 1 week and *food record* measurements were taken to determine the frequency of eating and appetite in stunted toddlers. Data analysis using univariate analysis.

The results of the research that has been done that the toddler's appetite before the complementary care action has an average of 6.723, and the lowest score of eating portions is 5 mouthfuls / spoonful of the highest 7 mouthfuls / spoonful. While after having an average of 9.187 standard deviation 0.910, and the lowest score of eating portions of 9 mouthfuls / spoon and the highest 11 mouthfuls / spoon so that there is an effect of tuina massage on increasing toddler appetite after and before tuina massage.

**Keywords:** *Complementary care, appetite, stunting*

### INTRODUCTION

Toddlerhood is the *golden age*. It is very important to pay attention to the pattern of child growth and development carefully so that as early as possible can be detected if there is negligence in the growth and development of toddlers. The problem of growth and development of toddlers is nutritional problems that cause children to be susceptible to disease. (Lusiani & Anggraeni, 2021).

According to the *World Health Organization* (WHO) in its 2022 report, globally, 149.2 million children under the age of 5 are stunted, 45.4 million are underweight, and 38.9 million are overweight. In the Southeast Asia and Africa region, 51 million children under the age of 5 are underweight, and another 151 million children under the age of 5 are stunted, with three-quarters of these children living in Asia and Africa.

Data obtained from the Health Office of Banjarnegara Regency, the number of toddlers who came to weigh in the posyandu was 61,387 toddlers, there were 4,844 (7.9%) malnutrition, 13,951 (22.7%) short toddlers, 35 (0.06%) malnutrition. Based on this data there are toddlers who experience stunting, undernutrition, and malnutrition so there are still toddlers at risk of stunting.

According to research (Montessori, 2021) several programs have been carried out to overcome the problem of stunting, especially PMT for toddlers and pregnant women, blood supplement tablets for pregnant women, complete basic immunization for infants and toddlers, vitamin A administration, and zinc administration in cases of diarrhea, especially in pregnant women and toddlers. Efforts to deal with the problem of stunting in the form of providing additional food. In the problem of appetite disorders, therapy is given to increase appetite.

Complementary care provided in the form of baby massage (baby massage, tuina massage using Citronella Oil), to facilitate appetite and increase the frequency of eating. Baby massage is given to improve blood circulation, increase child metabolism, improve cognitive function in children, increase endorphin hormones which can later make children calmer, improve the function of the vagus nerve which makes children hungry easily so that it can increase enzyme production so that appetite disorders can be treated (Purwanti et al., 2021).

Citronella oil, which is usually known as Citronella Oil, is used for massage and has antiseptic, antispasmodic, and diuretic properties that can be used as a heat reducer from distilling the leaves of the lemongrass plant. The content of geraniol and

citronellal in citronella oil is useful for increasing appetite. The purpose of this study was to determine the impact of providing Complementary Care with increase in appetite improvement for stunted toddlers in Banjarnegara Regency.

## METHOD

The design or design of the case study design used in writing this case study is a descriptive study in applying evidence based midwifery practice care with a midwifery process approach to research on the application of complementary midwifery care (*baby massage*, tuina massage with citronella oil) in overcoming eating difficulties in toddlers. Implementation takes time to collect data on toddlers who have difficulty eating and conduct an initial assessment of the respondent. The application was carried out on toddlers aged 3-5 years at the Banyumas Regency Health Center. Samples taken were 45 respondents from 10 Puskesmas with the criteria that toddlers have difficulty eating, toddlers who are not sick and not treated, and toddlers whose parents are willing to be respondents.

Data collection for this study used questionnaires and interviews. The questionnaire on eating difficulties uses *food recall* which will be carried out before the massage and after the massage using a food record for 1 week. This research has obtained a health research ethics license from Harapan Bangsa University with letter number No. B.LPPM-UHB/2066/07/2023.

## RESULT AND DISCUSSION

### 1. Respondent Characteristics

Table 1. Respondent Characteristics

Child Age Characteristics	Frequency	%
3 years	17	37,8
4 years	16	35,6
5 years	12	26,7
Total	45	100

  

Child Gender Characteristics	Frequency	%
Male	27	60
Female	18	40
Total	45	100

  

Mother's Education Characteristics	Frequency	%
SMP	28	62,22
HIGH SCHOOL	17	37,78
Total	45	100

In table 1, based on the characteristics of toddlers, most of them are at the age of 3 years, 17 (37.8%) with the gender of most males as many as 27 (60%). Based on the characteristics of junior high school mother's education as many as 28 (62.22%).

From the results of the mother's history there are characteristics of toddlers aged 3 years of 17 toddlers. This is because the age of 3-5 years is an active toddler, meaning a toddler who can already choose the food he likes. Body weight will tend to decrease, because toddlers aged 36-60 months are more active and cannot choose their own nutritious menus, so food intake is still based on the child's preferences and tastes, which causes stunting. (Aryani, 2023).

Based on toddlers with male gender as many as 27 (60%). The data is in accordance with the theory (Aprilia, 2022)

there is a relationship between the characteristics of stunting toddlers and gender, this is because men do heavier play activities than women who are very energy- draining. Women are less likely to experience stunting than men.

Based on the characteristics of junior high school mother education as many as 28 (62.22%) this is in accordance with research (Islamiati, 2024) said that education affects a person's learning process, namely the higher the education, the easier it is to receive information about health knowledge provided in meeting the needs of child growth and development. This is supported by research (Nabila, 2024) discusses early marriage which is associated with education which has a negative impact because it tends to be shy and more closed, some mothers feel ashamed of their marriage and pregnancy, resulting in the lack of information obtained by mothers regarding parenting, feeding and stimulation according to the age needed in child growth and development.

### 2. Toddler Appetite

Table 2 Average appetite of toddlers before and after complementary care measures.

Complementary care	N	mean	Std. Deviation	Min	Max
Before	45	6,723	0,655	5	7
After	45	9,187	0,910	9	11

Based on table 2, it can be seen that the appetite of toddlers before the complementary care action has an average of 6.723, and the lowest score of eating portions of 5 mouthfuls / spoonful of the highest 7 mouthfuls / spoonful. While after having an average of 9.187 standard deviation of 0.910, and the lowest score of meal portions of 9 mouthfuls / spoonful and the highest of 11 mouthfuls /

spoonful.

Based on table 2 shows that complementary care measures have been taken in the form of baby massage, tuina massage with citronella oil on 45 stunting toddlers. This shows that there is a relationship between baby massage, tuina massage using citronella oil with stunting problems because it has the benefit of increasing appetite in toddlers.

The results obtained from the land are in accordance with previous research. According to (Purwanti et al., 2021) said that the problem of appetite disorders in children can be given therapy in the form of baby massage. This therapy is given to facilitate toddler appetite. Baby massage is also given to improve blood circulation, increase children's metabolism, improve cognitive function in children, increase endorphin hormones which can later make children more tenan, and improve the function of the vagus nerve which makes children easily hungry so that it can increase enzyme production so that toddler appetite disorders can be handled. In addition, according to (Agustin et al., 2021) said that the geraniol and citronellal content in citronella oil is useful for increasing appetite in toddlers.

This shows that giving baby massage with citronella oil is proven to increase the appetite of stunted toddlers. In toddlers there are several factors that cause appetite problems such as nutritional factors, psychological factors and organic factors. The most common cause of appetite problems in toddlers is due to impaired spleen and digestive function. So that the food that enters the stomach is not immediately digested, which results in food stagnation in the gastrointestinal tract, the complaints submitted by parents on this issue are children often vomiting, nausea if fed, and the stomach feels full so

that it reduces appetite or even no appetite at all (Dobner, 2018).

Increased appetite in toddlers is due to tuina massage. This is because giving tuina massage helps improve blood circulation and can maximize organ function, one of the organs that can be maximized is the digestive organs. Where with massage intestinal motility will increase and will improve the absorption of food substances by the body and increase appetite. The results of this study are in line with Zaidatul Amaliyah's research in 2017, baby massage is effective for increasing the appetite and nutrition of infants under five years (Saputri, 2016). The results of this study are in line with the research of Roeslesmana & Noor in 2014 which states that there is an increase in the number of toddlers who are not difficult to eat after regular massage of toddlers (Roesliman, 2016).

Excessive stimulation of the nerve endings on the surface of the skin (massage) will cause the permeability of the cell membrane to thin so that it will facilitate the exchange of sodium (Na) and potassium (K) ions which will stimulate the potential in muscles and nerves. The action potential that occurs in sympathetic and para- sympathetic nerves will affect the work of organs, among others: stimulation of the vagus nerve will affect the gastrointestinal system, namely increasing peristalsis so that gastric emptying increases due to fast hunger (appetite will increase) and eating becomes ravenous. In addition, there will also be an increase in the production of digestive enzymes that will help the absorption of nutrients. The absorbed nutrients will enter the blood circulation which also increases due to stimulation from **sympathetic** nerves.

## CONCLUSION

Based on the results of research and discussion that has been done, it can be concluded that the appetite of toddlers before complementary care measures have an average of 6.723, and the lowest score of eating portions is 5 mouthfuls / spoonful of the highest 7 mouthfuls / spoonful. Whereas after having an average of 9.187 standard deviation 0.910, and the lowest score of eating portions of 9 mouthfuls / spoon and the highest 11 mouthfuls / spoon so that there is an effect of tuina massage on increasing toddler appetite after and before tuina massage.

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