


Application Mobile Health For Education And Prevention Stunting

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| Article Info | ABSTRACT |
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| Keywords: Stunting, ANTING, Mobile Health, Pharmacist, Education | Background: Stunting is a chronic nutritional problem that can interfere with a child's growth because it causes the child's height to not match his age or to be shorter. In 2021, Jember was ranked second in the East Java region with a score of 37.08%. ANTING is a mobile health-based Stunting Care Pharmacist which contained educational features and stunting prevention, one of which is through fulfilling clinical nutrition. Research Objective: The purpose of this study was to measure the increase in knowledge of families of stunting patients through mobile health-based education. Methods: This research was conducted at a health service facility in one of the sub-districts of Jember district. The research target was the families of stunting patients. This research used a quasy experiment with one group, pre and post test design. Researchers will carry out pre-test measurements from the beginning of the measurement and post-test on the same group at the last measurement. The sampling technique was accidental sampling for one month with a total of 32 samples. Results: The results of the study showed that there was an increase in the knowledge of stunting patients' families after receiving education through the media of mobile health applications which is marked p value 0,004. Conclusions: This ANTING provided some information related to stunting, especially in terms of preventing stunting, so that it has a positive effect on reducing the development of stunting rates. |
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INTRODUCTION

One of the disorders in children's growth that is currently being discussed is stunting. Stunting is a condition where the body length or height is less than its age, in other words the child experiences growth disorders which cause the child not to increase in height so he becomes short compared to his age. The condition of a short child is a sign of chronic nutritional problems in the child's growth. Several factors that cause stunting include the mother's lack of knowledge about health and nutrition before and during pregnancy (Yulaikhah et al., 2020). The prevalence of stunting in Indonesia reached 24.4% above the limit given by WHO of 20%. Jember Regency is one of the districts in the spotlight because in 2019 the stunting rate increased (Alhari et al., 2021).

The incidence of stunting in toddlers is necessary be taken seriously because of the impact of stunting can result stunted physical growth, motor and verbal development of the child, inhibits children's intelligence, susceptible to diseases, whether contagious or not

infectious, productivity becomes lower when the child enters adulthood, and risk of being overweight and obese. If you are overweight and obese, don't do it immediately handled, in the long term it will increase the risk of degenerative diseases (Ulfah et al., 2020).

There are many factors causes of stunting in toddlers. According to Trihono, the direct cause of stunting in toddlers, namely related to nutritional intake and the presence of diseases caused by infections. While the causal factors are indirect, stunting in toddlers can be caused by family food safety factors, patterns upbringing and family diet, health environmental and health services. all these indirect causal factors based on maternal education, poverty, disparities, social culture, government policies and politics (Hendryani et al., 2020).

One of the efforts made to prevent stunting includes detecting it as early as possible, providing education regarding stunting and nutrition, providing appropriate nutritional interventions, and carrying out monitoring. Efforts made to prevent stunting are carried out by several health workers involved, such as doctors, nurses, midwives, nutritionists and pharmacists. The role of health workers in reducing stunting rates is very much needed in preventing stunting. In the Covid-19 pandemic, interactions in daily life are very limited. In the era of industrial revolution 4.0, information and communication technology can be applied in mobile health-based applications so that communication can be carried out through these applications. "ANTING" (Apoteker Peduli Stunting). Pharmacist Cares about Stunting with education and stunting prevention features. This application can be used by health workers, especially pharmacists, who are alert in their role in overcoming stunting, especially in education, namely drug oriented and patient oriented. The mobile health application used to detect stunting is one of the efforts for early detection of stunting which is equipped with several existing features such as stunting education. This education is provided in an effort to increase information about stunting. With the above background, this application was created so that the incidence of stunting is minimized.

METHODE

This type of research is Research design the implementation of this research was carried out with several approaches to implementing "ANTING". The first approach is to carry out expert testing. Expert tests were carried out on the manufacture and materials related to "ANTING". Expert tests will be carried out by professional staff including doctors, nurses, midwives and the Calibration Laboratory. Doctors test and analyze the functioning of the tool to ensure the correctness of the tool for measuring stunting. Nurses and midwives measure children's clinical data. The calibration laboratory ensures that the equipment is actually functioning normally and is calibrated. Pharmacy plays a role in educating children with stunting. This research uses a quasy experiment with one group, pre and post test design. Researchers will carry out pre-test measurements from the beginning of the measurement and post-test on the same group at the last measurement. The sampling technique was accidental sampling for two months, with a total sample of 32 respondents. The statistical test used was the Intraclass Correlation Coefficients (ICC) test using statistical product and service Solutions (SPSS) 16 software. This research was conducted at a primary health care facility in one of the sub-districts of Jember district. The inclusion criteria are 1) Mothers who have stunted children up to 2 years old 2) follow the research protocol. 3) Willing to be a respondent.

RESULT & DISCUSSION

Research with title “The Influence Of Stunting Prevention Education To Improve Family Knowledge Of Stunting Patients Through “ANTING” Mobile Health “ with a total sample of 32 respondents provide research results as follows;

Table 1. Characteristics Based on Age(mother have stunting child): Research respondents were families of stunting patients who received education

| Mother Age (Year) | Frequency | Percentage (%) |
|-------------------|-----------|----------------|
| 17-25 | 12 | 45 |
| 26-35 | 10 | 22,5 |
| 36-45 | 10 | 22,5 |
| Amount | 32 | 100 |

From table 1, it is clear that almost half of the families of patients who received stunting education were in the 17-25 year age range. This age is the productive age of housewives who have growing children. Children in the stunting category have characteristics of height and weight that are less than standard and have several other complaints such as other symptoms such as coughs and colds which hinder growth (Astutik et al., 2020) (Prasetyawan et al., 2024).

Research Fitriami et al., (2022) was obtained that young mothers can prevent the occurrence of malnutrition in toddlers. In other words that older mothers (≥ 35 years) are at risk almost 11 times greater to have a toddler with malnutrition, while research by Labada et al., (2016) said that there was no relationship between age mothers with nutritional status of toddlers. Age is one factor which can describe a person's maturity meaning in terms of maturity of pattern formation. Food consumption that influences status nutrition .

Table 2. Characteristics Based on education (mother have stunting child): Research respondents were families of stunting patients who received education

| Education | Frequency | Percentage (%) |
|--------------------|-----------|----------------|
| Elementary School | 14 | 43,75 |
| Junior High School | 12 | 37,5 |
| Senior High School | 6 | 18,75 |
| Amount | 32 | 100 |

Based on table 2, it shows that the majority of mothers' education is elementary school. Based on several studies maternal education is an important element which can affect the nutritional status of their children due to a higher level of education knowledge or information about nutrition is expected owned becomes better apart from the mother's education, this incident is also related with the family economy (Rahmawati et al., 2017); (WHO, 2016); (Risksdas, 2018); (Kemenkes, 2020).

Table 3. Characteristics Based on child gender.

| Gender Child | Frequency | Percentage (%) |
|--------------|-----------|----------------|
| Female | 15 | 46,87 |
| Male | 17 | 53,12 |
| Amount | 32 | 100 |

Based on the data from the table, there are more males than females. Gender determine the amount of nutritional needs somebody. Men need more energy and protein than women. Man more capable of doing heavy work something women can't do. Women are less likely compared to boys for experiencing stunting and stunting during infancy and childhood, and in most developing countries, including Indonesia, more baby girls more likely to survive than babies man (Hidayah et al., 2014). Girls enter the period puberty two years earlier than boys, and two years is also a difference the peak of puberty between both sexes. Boys are more likely to experience stunting and/or underweight compared to girls. A number of research in sub-Saharan Africa indicates that it is a boy preschoolers are more likely to experience stunting compared to girls (Hidayani et al, 2024).

Tabel 4: Expert perception test results with respondents using the ICC test

| | Intraclass Correlation |
|------------------|------------------------|
| Single Measures | 0,855 |
| Average Measures | 0,968 |

Based on the content reliability test results, the evaluator value was 0.855, while the average value of the three assessors was 0.964 > 0.5, therefore it was concluded that the application developed had an adequate reliability coefficient. This correlated Nastiti (2021) study "The Introduction to The Research in Health Sciences" stating that the measuring instrument had adequate stability when the ICC value between the gauges was > 0.5, while for high stability, it was > 0.80.

Table 5. The effect of providing education to stunting families to increase knowledge

| Item | N | Mean | Sig (Tailed) |
|---------------------|----|------|--------------|
| Pre-Test | 32 | 2 | - |
| Post-Test | | 2,65 | - |
| Pre-Test; Post-Test | | -,65 | 0,004 |

The table shows that the statistical results of increasing knowledge of stunting families who receive education have a significant value marked by a p value <0.005. By providing education regarding nutritional needs, it can improve this knowledge can be applied to the health of stunted children. ANTING is a medium comprehensive so that it becomes an effective medium for nutrition education about internal stunting improving maternal nutritional behavior (Zogara et al.,2020).

CONCLUSION

Application mobile health "ANTING" is able to vide increased health knowledge about stunting and provided some information related to stunting, especially in terms of preventing stunting, so that it has a positive effect on reducing the development of stunting rates.

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