



The Effectiveness of Banner as an Educational Media to Increase Mothers' Knowledge about Animal Protein-Rich in Complementary Food for Stunting Prevention

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Abstrak

Asupan zat gizi pada balita khususnya protein menjadi hal yang penting untuk diperhatikan karena protein berfungsi sebagai zat pembangun. Balita yang kekurangan asupan protein terbukti lebih beresiko menderita stunting. Edukasi terkait MP-ASI kaya protein hewani kepada orang tua balita diperlukan untuk mendukung peningkatan asupan kaya protein hewani pada balita yang salah satunya dapat diberikan melalui media banner. Penelitian bertujuan untuk menganalisis efektivitas media edukasi banner terhadap peningkatan pengetahuan ibu balita terkait MP-ASI kaya protein hewani untuk pencegahan stunting. Penelitian menggunakan metode quasi eksperimental dengan desain one group pre test-post test pada ibu balita di wilayah kerja Puskesmas Tamalanrea Makassar. Sebanyak 44 ibu balita menjadi sampel dalam penelitian ini, yang dipilih menggunakan teknik purposive sampling sesuai dengan kriteria inklusi yaitu ibu yang memiliki balita dan bersedia mengikuti penelitian. Instrumen penelitian menggunakan banner sebagai media edukasi dan kuisioner untuk menilai pengetahuan sebelum dan setelah ibu balita diberikan edukasi. Edukasi didahului dengan penyuluhan menggunakan media banner tersebut kemudian banner dipasang sebagai media edukatif di Puskesmas Tamalanrea. Data yang diperoleh diolah dan dianalisis menggunakan SPSS dengan menggunakan uji paired t-test. Hasil penelitian menunjukkan terjadi peningkatan signifikan pada pengetahuan ibu balita terkait MP-ASI kaya protein hewani yaitu dari rata-rata 46,6 meningkat menjadi 80,7 dengan nilai p 0,001. Media edukasi berupa banner terbukti efektif dalam meningkatkan pengetahuan ibu balita terkait MP-ASI kaya protein hewani untuk pencegahan stunting. Penggunaan media edukasi serupa diharapkan dapat diterapkan di berbagai fasilitas kesehatan sebagai upaya promotif dan preventif dalam menanggulangi stunting di Indonesia.

Kata Kunci: Balita Banner; Ibu; MP-ASI; Stunting

Abstract

Nutritional intake in toddlers, especially protein, is important because of protein functions as a building nutrient. Toddlers with inadequate protein intake are more at risk of stunting. Education about animal protein-rich in complementary foods for mothers of toddlers is needed to increase the intake of animal protein in toddlers, which can be delivered through an educational media such as banner. This study aimed to analyze the effectiveness of banner as educational media to increase mothers' knowledge about animal protein-rich in complementary food for stunting prevention. This study used a quasi-experimental method with a one group pre test-post test design on mothers of toddlers in the work area of the Tamalanrea Health Center, Makassar. A sample of 44 mothers was selected using purposive sampling based on inclusion criteria, which were mothers with toddlers and willing to participate in this study. The instruments were banner as educational media and questionnaire to assess knowledge before and after the educational intervention. Education was conducted initially through a counseling session using the banner, which was then displayed at the Tamalanrea Health Center as an educational tool. Data were processed and analyzed using SPSS with a paired t-test. The results showed a significant increase in mothers' knowledge about animal protein-rich in complementary food with the average score rising from 46,6 to 80,7 with a p-value of 0.001. The educational media banner has proven effective in increasing the knowledge of mothers' about animal protein-rich in complementary food for stunting prevention. The use of similar educational media is expected to be implemented in various health facilities as a promotive and preventive effort in overcoming stunting in Indonesia.

Keywords: Banner; Complementary food; Mother; Stunting; Toddler

INTRODUCTION

Stunting is a nutritional problem that is prone to occur in toddlers and can affect their growth and development. Stunting in toddlers can have an impact on the low quality of human resources and is at risk of low work productivity in adulthood. Based on data from the Indonesian Health Survey (SKI) in 2023, the prevalence of stunting in Indonesia reached 21,5%. The prevalence of stunting in South Sulawesi is higher, reaching 27,4%, and especially in the city of Makassar, there has been an increase in the prevalence of stunting from 18,4% in 2022 based on the Indonesian Nutritional Status Survey (SSGI) to 25,6% in 2023 based on SKI. This is in contrast to the 2024 RPJMN target of reducing the prevalence of stunting to 14% in 2024 (Kemenkes 2023; Kemenkes 2024).

Stunting is a linear growth disorder in toddlers characterized by a child's length or height being shorter than their age. One of the causes is a lack of nutritional intake over a long period of time, even though at this time toddlers have relatively higher growth and development needs compared to adults, and if not met it will have an impact on their growth and development (Khoeroh, 2017). Research shows that toddlers with poor nutritional intake have a 2,6 times greater risk of stunting than toddlers with good nutritional intake (Suliastiningsih and Madi, 2013). Nutritional intake, especially protein, is something that needs to be considered because protein functions as a building substance. Long-term protein deficiency will disrupt body regulation and growth hormones can be disrupted which

can cause nutritional disorders such as stunting. Toddlers who lack protein intake have been shown to experience growth retardation (Fitri and Ernita, 2019).

One specific intervention to accelerate the reduction in stunting is providing animal protein to toddlers. Animal protein has a higher protein quality and more complete amino acids compared to vegetable protein (Kemenkes, 2023). Research shows that consuming animal protein can reduce the risk of stunting in toddlers. Toddlers who consume one type of animal protein per day during the period of complementary feeding (MP-ASI) have a 3,7% lower percentage of stunting than toddlers who do not consume animal protein during the period of MP-ASI. Toddlers who consume 2-3 types of animal protein per day even have a 5,7-6,1% lower percentage of stunting than toddlers who do not consume (Headey et al., 2018).

The results of the narrative review strengthen the need for holistic interventions that encourage increased intake of diverse foods rich in animal protein sources, especially during the period of MP-ASI in toddlers and do not only focus on one particular type of food. Therefore, the development of a holistic nutritional intervention program is needed to support increased intake of animal protein and diverse foods rich in animal protein for MP-ASI for toddlers, one of which is education for parents and caregivers (Rahmawati, 2023). This is in line with the government's program in the priority of handling stunting through increasing animal protein consumption, one

of which is by increasing education related to the consumption of animal protein sources for the Indonesian people, especially during the first 1000 days of life to prevent stunting, which can be provided through banner media.

Education on the consumption of animal protein sources for toddlers can be done as a form of education for parents and caregivers so that they can provide complementary foods rich in animal protein to toddlers to prevent stunting. Based on the description, the researcher is interested to analyze the effectiveness of banner as educational media to increase mothers' knowledge about animal protein - rich in complementary food for stunting prevention.

METHOD

This study used a quasi-experimental method with a one group pre test-post test design on mothers of toddlers in the work area of the Tamalanrea Health

Center, Makassar. A sample of 44 mothers was selected using purposive sampling based on inclusion criteria, which were mothers with toddlers and willing to participate in this study. The instruments were banner as educational media and questionnaire to assess knowledge before and after the educational intervention. Education was conducted initially through a counseling session using the banner, which was then displayed at the Tamalanrea Health Center as an educational tool. Data were processed and analyzed using SPSS with a paired t-test.

RESULT AND DISCUSSION

The results of this study could be seen from the knowledge of parents of toddlers before and after listening to the banner that had been installed at the Tamalanrea Health Center when they visited. The characteristics of parents of toddlers involved as respondents can be seen in Table 1.

Tabel 1. Respondent Characteristics

Characteristics	n	%
Sex		
Female	44	100
Male	0	0
Age		
23-30 years	21	47,7
31-37 years	23	52,3
Education		
Junior high school	4	9,1
Senior high school	26	59,1
University	14	31,8
Occupation		
Housewife	25	56,8
Employee	7	15,9
Self-employed	8	18,2

Civil servant	4	9,1
Total	44	100

Table 1 showed that all respondents were female with the most age in the 31-37 years which was 23 respondents (52,3%). The most education was high school graduates with 26 respondents (59,1%) and the most occupation as housewives with 25 respondents (56,8%). The study showed that there was no relationship between the mother's age and the nutritional status of toddlers, likewise there was no relationship between the mother's occupation and the nutritional status of toddlers, but there was a relationship between the mother's education and the nutritional status of toddlers because the higher the mother's education, the higher the mother's knowledge in implementing parenting patterns including providing complementary feeding to children in order to achieve good nutritional status (Labada et al., 2016). Before the respondents entered the health center, a questionnaire was given as a pre-test to determine the respondents' knowledge before reading and were explained about the banner that had been installed. After that, the questionnaire was given back to the respondents when the respondents left the health center as a post-test to determine the respondents' knowledge after reading and were explained about the banner. The results of the respondents' pre-post test can be seen in Table 2.

Table 2. Pre-Post Test Results of Respondents' Knowledge

Variables	n	Mean ± SD	p-value ^{a)}
Pre Test	44	46,6 ± 13,3	0,001*
Post Test	44	80,7 ± 8,2	

a) Paired T-Test

*Significant at p-value <0,05

Table 2 showed the results of the pre- and post-test of respondents assessed using a questionnaire. The average pre-test value of respondents was 46,6 then increased to 80,7 in the post-test value. The results of the Paired T-Test showed that there was a significant difference in the pre- and post-test values after respondents were explained and read the banner t with a p-value of 0,001.

Education is a formal process that aims to provide knowledge or train a skill. Providing education to parents of toddlers is intended to help parents apply attitudes and behaviors at home voluntarily so that they can be used as a habit that is applied daily, especially regarding the provision of MP-ASI rich in animal protein for toddlers in order to achieve good nutritional status in toddlers. Banners are media used to convey information related to knowledge that will be given to parents of toddlers, namely knowledge related to MP-ASI rich in animal protein for toddlers. Banners are one of the educational media that are attractive, easy to carry and use, can be used repeatedly, are durable and long-lasting,

easily seen by many people, and the information provided through banners tends to be more concise and clear. This information is important for parents of toddlers to know because animal protein consumption has been shown to reduce the risk of stunting in children. Toddlers who consume one type of animal protein per day during the period of complementary feeding (MP-ASI) have a lower percentage of stunting than toddlers who do not consume animal protein during the period (Headey et al., 2018).

The results of education through this banner show that there is a significant increase in knowledge among parents of toddlers after being explained and reading information related to MP-ASI rich in animal protein listed on the banner. This is in line with research conducted by Purnama (2021) which states that there is a significant difference in worker knowledge between before and after health education activities are carried out through banner media with a p value of 0.001. This shows that stunting prevention education through banner media can significantly increase the knowledge of parents of toddlers, especially regarding knowledge about MP-ASI rich in animal protein to prevent stunting.

CONCLUSION

There was a significant increase in the knowledge of parents of toddlers regarding complementary food rich in animal protein with a p value of 0,001 using banner media. The educational media banner has proven effective in increasing the knowledge of mothers' about animal protein-rich in complementary food for stunting prevention. This is expected to help

parents in implementing attitudes and behaviors at home, especially regarding the provision of complementary food rich in animal protein to prevent stunting so that it can be used as a habit that can be applied daily in order to achieve good nutritional status in toddlers. The use of similar educational media is expected to be implemented in various health facilities as a promotive and preventive effort in overcoming stunting in Indonesia.

REFERENCES

- Fitri, L., Ernita. 2019. Hubungan Pemberian ASI Eksklusif dan MP ASI Dini dengan Kejadian Stunting Pada Balita. *Jurnal Ilmu Kebidanan*.
- Headey D, Hirvonen K, Hoddinott J. 2018. Animal Sourced Foods and Child Stunting. *Am J Agric Econ*. 100(5):1302-19.
- Kemenkes. 2023. *Buku Saku Hasil Survei Status Gizi Indonesia 2022*. Jakarta: Kementerian Kesehatan Republik Indonesia.
- Kemenkes. 2024. *Survei Kesehatan Indonesia (SKI) 2023 Dalam Angka*. Jakarta: Kementerian Kesehatan Republik Indonesia.
- Khoeroh H. 2017. Evaluasi Penatalaksanaan Gizi Balita Stunting. *Unnes J Public Heal*.
- Labada, A., Ismanto, A. Y., Kundre, R. 2016. Hubungan Karakteristik Ibu dengan Status Gizi Balita yang Berkunjung di Puskesmas Bahu Manado. *eJournal Keperawatan*. 4(1).

Rahmawati, W. 2023. Cegah Stunting dengan Protein Hewani : Tinjauan Naratif. *Jurnal Gizi Mandiri*. 1(1).

Suliastiningsih, A., Madi, D. A. M. Y. 2013. Kurangnya asupan makan sebagai penyebab kejadian balita Pendek. *Jurnal Dunia Kesehatan*.