

The Effect Of Counseling Using Pocket Book Media On Stunting Prevention On Mothers' Knowledge Of Infants Aged 0–12 Months In The Working Area Of Puskesmas Perumnas II

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ABSTRACT

Background: Stunting is a national issue linked to chronic malnutrition, with Indonesia ranked second highest in Southeast Asia at 31.8% prevalence in 2020. At Puskesmas Perumnas II, cases rose from 76 in 2022 to 84 in 2023. Mothers' limited knowledge about stunting prevention, particularly during the first 1,000 days of life, is a key contributing factor. Pocket books offer an attractive, concise, and portable alternative for delivering health education.

Methods: Pre-experimental study using a one-group pretest-posttest design. A total of 50 mothers were recruited via consecutive sampling. Data were collected using a validated questionnaire (25 items, Cronbach's $\alpha = 0.723$). The Wilcoxon signed-rank test was used for analysis after normality testing confirmed non-normal distribution.

Results: Pre-test median score was 72 (SD = 14.092; range 32–92). Post-test median score improved to 100 (SD = 6.355; range 76–100). Wilcoxon test yielded p-value = 0.000 ($p < 0.05$), indicating a statistically significant increase in knowledge.

Conclusion: Pocket book-based health counseling significantly improved stunting prevention knowledge among mothers of infants aged 0–12 months. Puskesmas Perumnas II is recommended to integrate this media into routine health education programs.

ABSTRAK

Latar Belakang: Stunting merupakan isu nasional yang berkaitan dengan gizi kronis. Indonesia menempati posisi kedua tertinggi di Asia Tenggara dengan prevalensi 31,8% pada tahun 2020. Di Puskesmas Perumnas II, kasus stunting meningkat dari 76 kasus (2022) menjadi 84 kasus (2023). Pengetahuan ibu yang terbatas tentang pencegahan stunting, khususnya pada 1.000 hari pertama kehidupan, menjadi faktor penyebab utama.

Metode: Penelitian pre-experimental dengan desain one-group pretest-posttest. Sampel 50 ibu dipilih menggunakan consecutive sampling. Instrumen berupa kuesioner tervalidasi (25 soal, Cronbach's $\alpha = 0,723$). Analisis menggunakan uji Wilcoxon signed-rank test setelah uji normalitas.

Hasil: Median skor pre-test adalah 72 (SD = 14,092; rentang 32–92), meningkat menjadi 100 pada post-test (SD = 6,355; rentang 76–100). Uji Wilcoxon menghasilkan p-value = 0,000 ($p < 0,05$).

Kesimpulan: Penyuluhan dengan media pocket book secara signifikan meningkatkan pengetahuan ibu tentang pencegahan stunting. Puskesmas Perumnas II disarankan mengintegrasikan media ini dalam program edukasi kesehatan rutin.

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INTRODUCTION

Stunting is a national issue related to the quality of human resources in the future. This condition is characterized by the child's height being more than minus two standard deviations below the WHO standard median due to chronic malnutrition and recurrent infections. The prevalence of stunting children under five in Indonesia in 2020 was the second highest in Southeast Asia at 31.8%, while Timor Leste occupied the first position at 48.8% (Kementerian Kesehatan, 2018).

According to WHO, the stunting rate in Indonesia in 2022 still reached 31.0%, which is in the very high or chronic category (WHO, 2023). The results of the Indonesian Nutrition Status Survey (SSGI) recorded a decrease from 24.4% (2021) to 21.6% (2022), but hard work is still needed to achieve the national target of 14% by 2024. In West Kalimantan, the stunting rate decreased from 29.8% (2021) to 27.8% (2022), and in Pontianak City it was 19.7% (SSGI, 2023).

In the Perumnas II Health Center Working Area, West Pontianak District, the stunting rate has increased from 76 cases (2022) to 84 cases (2023), equivalent to an increase of 10.52%. Posyandu data shows four posyandu with the highest cases: Posyandu Rosela (15 toddlers), Kenanga (12 toddlers), Bougenvil (7 toddlers), and Anggrek Bulan (4 toddlers). In addition, 73 pregnant women with anemia and 70 pregnant women with Chronic Energy Deficiency (SEZ), which are risk factors for stunting, were recorded.

Mothers' limited knowledge about stunting prevention, especially in the first 1,000 days of life, is one of the main factors in the high stunting rate in this region (Aghadiati, 2023). A preliminary study at the Perumnas II Health Center shows that there are still many mothers who do not understand stunting prevention from an early age. Pocket book media was chosen as an educational medium because of its attractive, concise, practical, and easy-to-carry design, making it suitable for use in the posyandu environment (Wandira, 2023). Unlike booklets or e-modules, pocket books can be accessed at any time without the need for electronic devices.

Based on this description, this study aims to determine the effect of counseling using pocket book media on stunting prevention on the level of knowledge of mothers of babies aged 0-12 months in the Perumnas II Health Center Working Area.

METHOD

Types of Research

This study uses a pre-experimental design with a one-group pretest-posttest design approach.

Research Location and Time

The research was carried out in the working area of the Perumnas II Health Center, West Pontianak District, Pontianak City, West Kalimantan, on June 7-19, 2024. This research has received ethical approval from the Ethics Commission of the Pontianak Ministry of Health Polytechnic No.286/KEPK-PK. PKP/VI/2024.

Population and Sample

The population is all mothers who have babies aged 0-12 months in the Perumnas II Health Center Working Area, totaling 931 people. The sample size was calculated using the paired proportion formula (Dharma, 2011) and obtained 44 respondents, plus 10% anticipation of drop out so that the total sample was 50 mothers. The sampling technique uses consecutive sampling. Inclusion criteria include: willing to be a respondent and have a baby aged 0–12 months. Exclusion criteria: not present during the research or unable to read and write.

Data Collection

Data collection was carried out using a likert scale questionnaire and employee Rank Sequence List as of April 2017. The statement on the questionnaire is in the form of a positive/*favorable statement* with five answer choices, namely a score of 5 for a very agreeable choice of answer, a score of 4 for a choice of unagreeable answer, a score of 3 for a choice of disagreeable answer, a score of 2 for a choice of unpleasant answers, and a score of 1 for a very unpleasant choice of answer.

The questionnaire was tested for validity with *Product Moment Correlation* and the reliability test was carried out with the Cronbach Alpha Coefficient Technique. The initial questionnaire amounted to 33 items, after the validity test was carried out, only 26 items were declared valid and 7 items were declared invalid. An item that is invalid because it has a calculated value of r lower than the r of the table, which is 0.339. The range of validity test results is between 0.352 – 0.725. Invalid statements are removed from the list before reliability testing is performed. Reliability tests were performed on 26 items and based on the test results all statements were declared reliable with a calculated r -value greater

than the r-table value. All statements are declared reliable with the results of the *Alpa Cronbach statistical test* with a value range between 0.668 – 0.706.

Data Processing and Analysis

The research instrument in the form of a questionnaire developed by the researcher includes 25 questions about: definition of stunting (2 questions), characteristics and symptoms (4 questions), causes (7 questions), impact (5 questions), monitoring (1 question), and stunting prevention (6 questions). The validity test was conducted on 30 mothers of infants at the Gang Sehat Health Center and PMB Utin Mulia using Product Moment Correlation ($r\text{-table} = 0.361$, level 5%). Three items of knockout questions (numbers 6, 10, 26). The reliability test using Cronbach's Alpha obtained a value of 0.723 (> 0.600), so that the instrument was declared reliable.

The intervention was carried out by providing direct counseling using a pocket book for 35 minutes at the four posyandu with the highest stunting cases (Posyandu Rosela, Kenanga, Bougenvil, and Anggrek Bulan). Respondents filled out a pre-test questionnaire before the intervention and a post-test questionnaire afterwards. Data analysis used the Kolmogorov-Smirnov normality test ($n \geq 50$), and because the data were not normally distributed ($p < 0.05$), it was followed by the Wilcoxon signed-rank test.

RESEARCH RESULTS

Table 1. Frequency Distribution of Respondent Characteristics (n=50)

Respondent Characteristics	n	Percent (%)
Age		
< 20 years old	0	0
20 – 35 years	33	66
> 35 years	17	34
Total	50	100
Education		
Basic	4	8
Secondary	45	90
Higher	1	2
Total	50	100
Employment		
Work	2	4
Not working	48	96
Total	50	100

Based on Table 1, most of the respondents (66%) were of healthy reproductive age (20–35 years), almost all of them were secondary education (90%), and almost all were unemployed (96%).

Table 2. Knowledge Score by Indicator Before and After Pocket Book Counseling (n=50)

Research Variables	Pre n	Pre %	Post n	Post %	Change
Definition of Stunting	92	92.0	100	100.0	+8.0%
Signs & Symptoms	149	74.5	197	98.5	+24.0%
Causes of Stunting	221	63.1	332	94.8	+31.7%
Impact of Stunting	168	67.2	244	97.6	+30.4%
Stunting Monitoring	42	84.0	49	98.0	+14.0%
Stunting	233	77.6	284	94.6	+17.0%

Based on Table 2, all indicators of knowledge showed an increase after being given counseling. The largest increase occurred in the indicators of the causes of stunting (+31.7%) and the impact of stunting (+30.4%), while the increase in the indicators of the definition of stunting was relatively small (+8.0%) because the initial value was already high (92%).

Table 3. Wilcoxon Signed-Rank Test: Knowledge Before and After Pocket Book Counseling (n=50)

Research Variables	Mean	SD	Min	Max	p
Knowledge – Pre-test	72	14.092	32	92	0.000
Knowledge – Post-test	100	6.355	76	100	

Based on Table 3, the median pre-test score of 72 (SD = 14.092; range 32–92) increased to 100 at post-test (SD = 6.355; range 76–100). The Wilcoxon test yielded a p-value = 0.000 ($p < 0.05$), which showed that there was a significant effect of counseling using pocket book media on the mother's level of knowledge about stunting prevention.

DISCUSSION

Before the intervention, the median maternal knowledge score was 72, with a minimum score of 32. Some mothers already have basic knowledge about stunting, especially about its meaning (92%), but there are still many who do not understand the specifics of the causes (63.1%) and the impact of stunting (67.2%). This is in line with Rahayu (2022) research which found that the level of maternal knowledge about stunting was most in the medium category (46.7%). Inadequate knowledge related to child parenting and nutrition has an impact on increasing the risk of stunting (Muriyati, 2021).

The characteristics of the respondents have an effect on this condition. Most mothers are of healthy reproductive age (66%), which should be more open to new information. However, most are second-educated (90%) and unemployed (96%), which affects the access and depth of information they receive. Knowledge can be influenced by age, education, and experience (Rohman, 2021). Mothers who do not work have limited exposure to information from the work environment, so active counseling such as those carried out at posyandu is very important (Rokhaidah, 2022).

After being given counseling using pocket book media, the median score increased significantly to 100 with a standard deviation that decreased from 14,092 to 6,355. This decrease in standard deviation showed that respondents' knowledge became more homogeneous after the intervention, which indicated the effectiveness of the media. The average post-test score of 96.2% indicates an excellent improvement in all indicators.

This increase is in line with research by Utario (2023) who proved that the use of booklet media significantly increases maternal knowledge about stunting ($p = 0.000$). According to Juniantari et al. (2024), mothers with good nutritional knowledge are able to implement the right diet and monitor the child's growth optimally. Pocket book media that is designed in an attractive, concise, and easy-to-understand manner has proven to be able to effectively convey information to mothers with diverse educational backgrounds (Wandira, 2023).

The results of the Wilcoxon test with p-value = 0.000 ($p < 0.05$) proved that there was a significant influence of counseling using pocket book media on increasing maternal knowledge about stunting prevention. These findings are consistent with the research of Ibrahim et al. (2023) on stunting counseling using video media ($p < 0.000$) and the research of Tampilang & Setiawan (2021) on the HIV/AIDS E-Pocket Book which showed a significant increase in adolescent knowledge.

Pocket book media has advantages over other media because of its small size and practicality to bring to the posyandu, its attractive design, and its short and concise content so that it is easier to understand. Siregar (2017) stated that a well-developed pocket book has an average feasibility rate of 87.8% according to experts' assessments. In addition, pocket books can continue to be used as a reference after the counseling session is over, so that the impact of education can continue (Oktaviani, 2020).

The limitations of this study include the absence of a control group, so it cannot completely rule out the influence of external factors. In addition, the research was only conducted in the short term so the long-term effects of the intervention could not be measured.

CONCLUSIONS AND SUGGESTIONS

Counseling using pocket book media on stunting prevention has been proven to significantly increase the knowledge of mothers of babies aged 0–12 months in the Perumnas II Health Center Working Area (median score from 72 to 100; $p = 0.000$). All indicators of knowledge — including definition, characteristics and symptoms, causes, impacts, monitoring, and stunting prevention — experienced a significant increase.

The Perumnas II Health Center is recommended to integrate pocket books as a routine educational medium in posyandu activities to support efforts to reduce stunting rates. Further research is recommended using a design with a control group and measuring the long-term effects on maternal behavior changes.

Author's Contribution Statement:

Dessy Hidayati Fajrin: Conceptualization, Methodology, Investigation, Data Curation, Formal Analysis, Writing – Original Draft. **Novi Dwi Utami:** Conceptualization, Methodology, Supervision, Writing – Review & Editing. **Asmaurika Pramuwidya:** Methodology, Investigation, Writing – Review & Editing, Validation.

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