

## VIDEO AND BOOKLET IMPROVING THE LEVEL OF PREGNANT MOTHER'S KNOWLEDGE, ATTITUDE, AND BEHAVIOUR TO PREVENTED STUNTING

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### ABSTRACT

**Background:** Stunting is a condition characterized by the delayed growth and development of children over a prolonged period, especially during the first 1000 days of life (1000 HPK). It is begun from pregnancy and the first two years of life. Chronic malnutrition also causes stunting. Brain development disorders, children' comprehension disorder, physical growth disorders, and metabolic disorders are the harmful effect from stunting. One of the causes of stunting is the lack of mother's knowledge, attitudes, and behaviors regarding child health and nutrition. educational media like video and booklet containing information about nutrition for pregnant mother can be implemented to improve the limitation in maternal knowledge. This study aims to obtain a comprehensive overview of nutrition education using video and booklet media.

**Method:** This study applies Research and Development (R&D) method with the development of ADDIE model. The Analysis stage involves identifying video, booklet, and the goals to be achieved. The design stage involves planning and developing the video and booklet design. The development stage involves creating video and booklet materials and developing them. The implementation stage is the applying of the educational media that have been designed and developed. Finally, the evaluation stage measures the effectiveness of the video and booklet media.

**Result:** the results came from the validation by subject expert, language expert, and media expert. The average validation score is 85,4%, which falls within the acceptable range.

**Conclusion:** The validation results indicated that the media is suitable for pilot project. Each expert also provided very specific suggestions to produce high-quality media.

**Keywords:** stunting, pregnant mother, Educational media.

### INTRODUCTION

Stunting is an inappropriate condition of children' height and growth for their age. Malnutrition from the time of pregnancy until children turns 2 years old causes their growth and development are stagnant. This condition effects the stagnancy in physical impairment, language, sensorimotor, and intellectual development (WHO, 2015).

The knowledge of pregnant mother, child-rising practices, nutritional intake of children are some factors causing stunting (Kurniawati et al., 2023; Junita et al., 2023).

Either in long term or short term, it brings various problems. They are included brain development disorders, children' comprehension disorder, physical growth disorders, and metabolic disorders. Stunting also leads to decreased immunity, reduced cognitive and academic performance, increased risk of diabetes, obesity, heart disease, stroke, and other chronic illnesses, including decreased work quality (UNICEF, 2020).

Nutritional problems, especially stunting in early childhood, can delay children' growth and development. They also have negative

effects that will continue into adulthood. These impacts include decreased productivity, reduced intelligence, increased susceptibility to non-communicable diseases, poverty, and the possibility of having low birth weight babies (Ngaisyah, 2015; Junita et al., 2023).

The lack of knowledge from pregnant mother can be improved through education. It is included the use of educational media like video and booklet containing information and comprehension of nutrition (Khairunnisa & Kurniasari, 2022).

The distinctive goal of this research is to produce educational media in the form of video and booklet to enhance the knowledge, attitudes, and behaviors of pregnant mother in preventing stunting.

## METHOD

This type of research uses the Research and Development approach. R&D development aims to create and validate educational videos (Molenda, 2015). This study utilizes the Research and Development (R&D) approach with the development of the ADDIE model. The Analysis stage involves identifying video media and the objectives to be achieved, Design involves planning and developing video designs, the Development stage involves creating video materials and developing video media, Implementation is the implementation of education that will be designed and developed, and Evaluation is a measurement of the effectiveness of video media.

### Analysis

This study applies qualitative approach to develop video and booklet needed by pregnant mother for stunting prevention. In addition to expert validation, the video and booklet are also tested through forum group discussion with healthcare workers, who then give the evaluation.

## Design

Duration of the educational video is 2-5 minutes, which aligns with the effective video duration for learning (Adam et al., 2019). The nutrition education content refers to Hardiansyah and Supariasa's guidelines (Hardiansyah & Supariasa, 2017). The balanced nutrition guidelines are also outlined in the Regulation of the Indonesian Ministry of Health No. 41 of 2014. Then the nutritional adequacy is outlined from the Regulation of the Indonesian Ministry of Health of 2019. Lastly, the first 1000 days movement to prevent stunting in Indonesia as written by Ruaida (2018) and several other reference books.

## Development

The video and booklet will be validated by three experts: a subject matter expert, a language expert, and a media expert. Subsequently, the validation results are converted into Likert scale with 5 categories (Teguh et al., 2014).

1 means very poor; 2 means poor; 3 means fair; 4 means good; 5 means very good. After giving the assessment, the experts also offer comments or suggestions about the quality of the video and booklet for stunting prevention in pregnant mother to the researchers. The comments and suggestions are then used to revise the developed products.

**Table 2.** Media Feasibility Category

Interval score	Category	Practicality Category
90% - 100%	Excellent	Very feasible, no need revision
77.5% - 89%	Good	Visible, revised as needed
65% - 74%	Fair	Reasonably feasible, needs substantial revision.
55.5% - 64%	Poor	Not quite feasible; needs extensive revision.
0% - 54%	Very poor	Not feasible; requires A total revision.

The assessment results from the expert are then calculated using the following formula:

$$NP = \frac{R}{SM} \times 100\%$$

Explanation:

NP : Percentage Score

R : Obtained score  
SM : Maximum score  
(Purwanto, 2014).

### Implementation

Video and booklet, as the developed media, are tested through forum group discussion with health workers. They also assessed the quality of the media. The scores are calculated according to the percentage formula, as well as the feasibility of the video and booklet media based on a percentage scale. Subsequently, revisions are made based on the feedback from group discussion forum before implementation with respondents.

## RESULTS AND DISCUSSION

### Results from Focus Group Discussion

This study developed video and booklet as educational materials which have been validated and tested in a forum group discussion to improve the knowledge, attitudes, and behaviors of pregnant mother in preventing stunting. The discussion process was conducted with 10 healthcare workers in the study area, including nutritionists, midwives, and environmental health professionals.

**Table 2.** Forum Group Discussion

Media	%	Kriteria
Video	91,3%	Very veasible, no need revition
Booklet	86,5	Visible, revised as needed

The average score from Table II was 88,9%, indicating that it is fisible, revised as needed.

### Validation from Subject Experts

The validation process was conducted once on April 26, 2024. The expert validator was a nutrition specialist from the regional hospital in Deli Serdang, North Sumatra. The validation results are as follows:

**Table 3.** Validation from Subject Experts

Media	%	Criteria
Video	88,6%	Visible, revised as needed
Booklet	88,6%	Visible, revised as needed

### Validation from Language Expert

The language expert validation process was conducted once on April 29, 2024. The results are as follows:

**Table 4.** Language Expert Validation

Media	%	Criteria
Video	80%	Visible, revised as needed
Booklet	80%	Visible, revised as needed

### Validation from Media Expert

The media expert validation process was conducted once on April 30, 2024. The results are as follows:

**Table 5.** Media Expert Validation Results

Media	%	Criteria
Video	88 %	Visible, revised as needed
Booklet	87,5 %	Visible, revised as needed

The delivery of educational materials through videos is an effort to utilize advances in information and communication technology to support the educational process and combine the extension process with the use of video media as a learning guide (Harahap,et al 2018). The advantages of video media are that it can attract attention in a short time away from other external stimuli, and difficult demonstrations can be prepared and recorded in advance, so that when providing education, it is possible to focus on respondents, and can save time and recordings can be played repeatedly, as well as high and low voices can be adjusted (Wati et,al ,2020). The purpose of developing booklets, according to Raymond S. Simamora (2009), is to provide reference sources (reading materials) to community groups whose access to book sources is limited. People can learn the same information from booklets as they do from books in a short reading time (Listyarini and Fatmawati, 2020).

## CONCLUSION

The validation results came from subject matter experts, language experts, and media experts on the impact of developed video and booklet on pregnant mother's knowledge, attitudes, and behaviors in preventing stunting. The average validation score is 85,4%, which falls within the acceptable range. Some revisions may be necessary as needed. Feedback and suggestions consisted of the improvements in background images, adjustments in the use of words, and the rules

for combining and separating words. The validation results will be used as a basis for revising the draft before creating the video and booklet.

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## CONFLICT OF INTEREST

There was no conflict of interest in this article.

## REFERENCES

- Adam, M., Tomlinson, M., Le Roux, I., LeFevre, A. E., McMahon, S. A., Johnston, J., Kirton, A., Mbewu, N., Strydom, S.-L., Prober, C., & Bärnighausen, T. (2019). The Philani MOVIE study: A cluster-randomized controlled trial of a mobile video entertainment-education intervention to promote exclusive breastfeeding in South Africa. *BMC Health Services Research*, 19(1), 211. <https://doi.org/10.1186/s12913-019-4000-x>
- Hardinsyah, & Supariasa, I Dewa Byoman. (2017). *Ilmu Gizi Teori dan Aplikasi*. Jakarta: Penerbit Buku Kedokteran EGC.
- Junita, J., Rusmimpong, R., Triana, W., & Putra, E. S. (2023). Simpatik Education Model for Knowledge and Diversity of Food Intake for Stunting Toddlers in Kerinci Regency. In *Proceeding International Conference Health Polytechnic of Jambi* (Vol. 2, pp. 1-8).
- Junita, J., Rusmimpong, R., Triana, W., & Putra, E. S. (2023b). SIMPATIK website nutrition education on mother's knowledge and diversity of toddler consumption in Jambi City. *AcTion: Aceh Nutrition Journal*, 8(2), 270-277.
- Khairunnisa, D. Y., & Kurniasari, R. (2022). Literature Review: Pengaruh Edukasi Gizi Melalui Media KIE Gizi Terhadap Pengetahuan Mengenai Konsumsi Sayur dan Buah Pada Remaja. *HEARTY: Jurnal Kesehatan Masyarakat*, 10(2), 42-52. <https://doi.org/10.32832/hearty.v10i2.5932>
- Kurniawati, S., Riska, N., & Rusilanti. (2023). Pengembangan Media Video Animasi Bagi Remaja Putri Untuk Pencegahan Bayi Lahir Stunting. *Journal of Comprehensive Science (JCS)*, 2(8), 1278–1291. <https://doi.org/10.59188/jcs.v2i8.476>
- Ngaisyah, R. D. (2015). Hubungan Sosial Ekonomi dengan Kejadian Stunting pada Balita di Desa Kanigoro, Saptosari, Gunung Kidul. 10(4). 65-70, <https://doi.org/10.35842/mr.v10i4.105>
- Purwanto. (2014). *Evaluasi Hasil Belajar* (Cetakan 3). Yogyakarta: Pustaka Pelajar.
- Tegeh, I. M., Jampel, I. N., & Pudjawan, K. (2014). *Model Penelitian Pengembangan*. Yogyakarta: Graha Ilmu.
- UNICEF. (2020). *Situasi Anak di Indonesia – Tren, Peluang, dan Tantangan Dalam Memenuhi Hak-Hak Anak*. Jakarta: UNICEF Indonesia.
- WHO. (2015). *Who Estimates of the Global Burden of Foodborne Diseases*. Switzerland: WHO Press.