

## The Impact of "Teman Bunda" Pocket Book Print Media Education on Mothers' Knowledge of Toddler's Growth and Development

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### ABSTRACT

Good nutritional status is crucial to support toddler's growth and development. The high prevalence of nutritional and developmental issues in toddlers is, in part, influenced by the mother's knowledge. That's why the efforts to increase mother's knowledge are urgently needed, including through the use of various effective media. This study aims to assess the impact of providing education using the "Teman Bunda" Pocket Book as a print media tool. This research utilized a quasi-experimental method with a pretest-posttest design. The study sample included 88 respondents selected using a disproportional stratified random technique. The results showed that, prior to the educational intervention using the "Teman Bunda" Pocket Book, 14 respondents (16%) had poor knowledge, 32 respondents (36%) had adequate knowledge, and 42 respondents (48%) had good knowledge. After the intervention, 8 respondents (9%) still had poor knowledge, 24 respondents (27%) had adequate knowledge, and 56 respondents (64%) had good knowledge. Statistical analysis using the Marginal Homogeneity Test yielded a p-value of  $0.001 < \alpha 0.05$  ( $p = 0.001$ ), indicating that  $H_0$  is rejected. This confirms that the educational intervention using the "Teman Bunda" Pocket Book Print Media significantly influences mothers' knowledge regarding toddler's growth and development. It is suggested that health workers could help parents to understand and monitor the toddler's growth and development by utilizing various media provided, including "Teman Bunda" pocket book.

## Introduction

Good nutritional status is crucial for supporting a child's growth and development. High rates of malnutrition and developmental delays in toddlers are partly influenced by mothers' knowledge. The World Health Organization (WHO) reported in 2019 that 52.9 million children worldwide experience developmental delays, with 54% of these cases occurring in low- and middle-income countries (Andinawati et al., 2020). In Indonesia, routine data from 2020 showed that 66% of children had their growth and development monitored, 42% received early childhood stimulation, detection, and intervention services (SDIDTK), and 7.5% experienced developmental delays (Diah, 2020). Additionally, 5% of Indonesia's population consists of infants, with the percentage of those experiencing developmental delays ranging from 5.3% to 7.5% on average (Purnamasari et al., 2023).

Several factors contribute to delays in a child's growth and development. The first is genetic or hereditary factors, which are internal influences on an individual's growth and development. The second factor is parental influence. A child's development is shaped by various genetic and environmental factors, including prenatal, perinatal, and postnatal environments. Prenatal factors include maternal nutrition during pregnancy, exposure to toxins or chemicals, endocrine



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factors, radiation, infections, stress, immunizations, and embryonic anoxia. Perinatal factors include complications such as hyperbilirubinemia and asphyxia that may affect a child's development. Postnatal factors are divided into biological influences such as race/ethnicity, sex, age, nutritional status, healthcare, disease susceptibility, chronic health conditions, metabolic function, and hormones. Physical factors such as climate, season, geographical location, sanitation, housing conditions, and radiation also play a role. Additionally, family and cultural practices can impact a child's growth and development. Nutritional status is another critical factor (Khadijah et al., 2022)

Delays in a child's growth and development can have several adverse effects, including impaired brain development, frequent illness or weakened immune systems, excessive anxiety or fear, emotional instability, and cognitive disorders (Karim et al., 2021). Parents are key to a child's successful growth and development. They are the first individuals a child looks to as extraordinary figures beyond themselves, and through them, children first learn about the world. Parents help children develop all aspects of themselves. Therefore, to reduce the incidence of growth and developmental delays, parents must understand their child's current growth and development and provide sufficient stimulation and nutrition to support their child's progress. One effective way to enhance parental knowledge is by providing a pocketbook on child growth and development, serving as a companion for mothers in monitoring their child's progress. This study aims to assess the impact of providing education through the "Teman Bunda" pocketbook print media.

## Methods

This study employs a quasi-experimental design with a pretest-posttest framework. It was conducted in Mlajah Village, within the working area of Bangkalan Public Health Center, from July to August 2024. The research population was 112 mothers of toddlers spread across 10 posyandu. Samples were taken using a disproportional stratified random sampling technique and 88 samples were selected.

A sample of a group of mothers who attended each scheduled posyandu were given a pretest questionnaire containing questions about the child's growth and development. The mother was next educated using a "Teman Bunda" pocket book, then a posttest evaluation was carried out at the end of the session.

Data analysis was performed using the Marginal Homogeneity Test with a significance level of  $p < 0.05$ .

## Results

Table 1 Distribution of Mothers' Knowledge Before and After Receiving "Teman Bunda" Pocket Book Print Media Education.

Variable	Category	Before Education		After Education	
		Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)
Maternal Knowledge	Poor	14	16	8	9
	Sufficient	32	36	24	27
	Good	42	48	56	64
<b>Total</b>		88	100	88	100

Based on the table above, it was found that before receiving the "Teman Bunda" pocketbook print media education, 14 mothers (16%) had poor knowledge, 32 mothers (36%) had sufficient knowledge, and 42 mothers (48%) had good knowledge. After receiving the education, the results



showed that 8 mothers (9%) still had poor knowledge, 24 mothers (27%) had sufficient knowledge, and 56 mothers (64%) had good knowledge.

Table 2 The Impact of "Teman Bunda" Pocket Book Print Media Education on Mothers' Knowledge of Toddler's Growth and Development

Variable		Knowledge After Education			Total	P-Value
		Poor	Sufficient	Good		
		n	n	N		
Knowledge Before Education	Poor	8	3	3	14	0.001
	%	57	21	21	100	
	Sufficient	0	21	11	32	
	%	0	66	34	100	
	Good	0	0	42	42	
	%	0	0	100	100	

Based on the table above, the results indicate that among the mothers who had poor knowledge before the education, 8 (57%) remained in the poor category after the education, while 3 (21%) improved to a sufficient level, and another 3 (21%) advanced to a good level, totaling 14 mothers. For those who initially had sufficient knowledge, none regressed to the poor category; instead, 21 (66%) maintained their sufficient level, and 11 (34%) progressed to a good level, totaling 32 mothers. Among the mothers with good knowledge before the education, none experienced a decline to either poor or sufficient levels, and all 42 (100%) retained their good knowledge, totaling 42 mothers. With a p-value (0.001) <  $\alpha$  (0.05), the null hypothesis ( $H_0$ ) is rejected. Therefore, it can be concluded that the "Teman Bunda" pocketbook print media education has a significant impact on mothers' knowledge of toddler's growth and development.

## Discussion

Maternal knowledge is a key factor in supporting the developmental process of young children. Knowledge forms the basis for thinking and evaluating situations to find answers to questions. Education is crucial as it plays a role in learning, receiving information, and improving mental abilities, attitudes, and behaviors. Providing education is a form of instruction aimed at informing mothers about child development.

Based on the data analysis, the results show a p-value of  $0.001 < \alpha 0.05$  ( $p=0.001$ ), indicating a significant effect of the "Teman Bunda" Pocket Book Media Education on mothers' knowledge about toddler' development. The study results show an increase in mothers' knowledge before and after receiving education. Before the education, 16% of mothers had poor knowledge, which decreased to 8% after the education. In the category of adequate knowledge, it decreased from 36% before the education to 27% after the education, while the percentage of mothers with good knowledge increased from 42% to 64%. This indicates that there was an improvement in mothers' knowledge after the education using the "Teman Bunda" pocketbook. These results align with Rahayu & Widyastutik (2024) who was analyzing the influence of health education through the media pocket book on the knowledge of mothers of infants under five about the detection of infant growth and development and toddler. The results of the bivariate test are known to obtain a significance value of  $0.000 < 0.05$ , so that It was concluded that there was a significant influence between health education through pocket book media on the knowledge of the mothers ababout detection of the growth and development of babies and toddlers in the village of Sukorejo, Musuk District, Boyolali. Pocket book is a book with practical references that designed to provide important and useful information in a specific field, with small size and easy



to carry. Pocket book provides the advantage of quick access to information needed which can help mother to understand more quickly. (Rahayu & Widyastutik, 2024)

Our findings is also align with (Setiyaningsih et al., 2024) ,which state that most respondents experienced an increase in knowledge after receiving health education interventions using pocketbooks. Most respondents were categorized as having good knowledge after the intervention, with 22 mothers (73.3%) having good knowledge. The Wilcoxon signed-rank test showed a significant change in knowledge levels before and after the intervention, with a significance value of  $p=0.001$  ( $p \leq 0.05$ ), indicating that H1 is accepted, meaning that there is an effect of health education using pocketbooks on mothers' knowledge in preventing stunting. Knowledge is fundamental to action. Higher knowledge increases the likelihood of acting according to the knowledge acquired. Various methods can enhance knowledge, including education and the use of pocketbooks. The "Teman Bunda" pocketbook significantly increased parents' knowledge about child growth and development. Knowledge is categorized into six levels: Knowing, Comprehending, Applying, Analyzing, Synthesizing, and Evaluating. To reach the application level, one must first achieve the levels of knowing and comprehending. Thus, to enhance parental involvement in stimulating child development, parents must be knowledgeable and understand development concepts, such as those provided by the "Teman Bunda" pocketbook. Increased knowledge can result from several factors, including the provision of pocketbooks as a guide for parents in monitoring child development. The study concludes that the "Teman Bunda" pocketbook effectively enhances parental knowledge.

Education is a process of providing information to increase understanding and knowledge (Nafilah & Eliyana, 2023). According to the Health Belief Model, knowledge influences beliefs about vulnerability, severity of diseases, benefits and barriers to practicing preventive health behaviors, and self-efficacy. Education is a process of transforming knowledge, attitudes, and behaviors through teaching, training, and research (Puspitasari et al., 2020). Education is an effective means to improve knowledge, as it provides additional information relevant to current needs. Education about child growth and development helps parents enhance their role in accelerating their child's development.

Education is more effective when supported by media, such as pocketbooks. Media are communication tools that facilitate information dissemination (Nafilah & Eliyana, 2023) . One such media is the pocketbook (Oryanti et al., 2022). Pocket books are small, lightweight, and can be carried easily, allowing for convenient reading at any time (Yuniarni et al., 2023). Pocket books provide a focused and repeatable source of information, which is useful in various situations without additional cost. Pocket books are expected to arouse interest, and make it easier for respondents to re-study the information. They also have benefits and advantages compared to other educational media, such as learning using pocket books can be clearer because the information contained is concise, concise, and clear. In addition, the pocket book is also attractively designed by including many pictures to make it easier to learn the material provided. (Safitri et al., 2023). The "Teman Bunda" pocketbook, with its focused content on child stimulation, offers parents a resource for reading during counseling sessions and at home. When parents face challenges or need information on child activities, the pocketbook serves as a readily accessible reference (Noviana et al., 2023).

Different individuals have varying memory capacities, and media like pocketbooks can help reinforce memory and understanding of the material presented. The "Teman Bunda" pocketbook is a practical choice due to its portability and focused content, tailored language, and relevance to the reader.

The study underscores the necessity of the "Teman Bunda" pocketbook as a companion for mothers in monitoring their child's development to ensure it aligns with age-appropriate



milestones. Data from the study reveal changes in maternal knowledge before and after the educational intervention.

Child development requires significant attention from parents. Since each child develops differently, parents must recognize their child's growth patterns to address any delays or deviations. High knowledge about child development encourages parents to facilitate their child's growth effectively. Parents can provide stimulation to support the child's development, alongside proper nutrition. Multiple factors contribute to child development, and parents must optimize these factors.

One influencing factor is maternal knowledge and attitudes, which are shaped by cultural beliefs. In this study, most respondents are from the Madurese ethnic group, which has unique cultural beliefs, such as not giving the first breast milk due to perceived bacterial contamination and providing supplementary food before 6 months (Masmuri et al., 2024). Whereas, giving first breastfeeding can increase the emotional bond between mother and child. The emotional bond between mother and child enhances immunity, prevents illness, and supports cognitive development (IQ). The mother-child relationship involves complex psychological and biological aspects, influencing brain growth, hormone production, and overall health (Fadillah, 2023). Therefore, mothers are primary supporters in child development.

Parents, especially mothers, play a crucial role in monitoring their child's development. They must understand and assess developmental appropriateness. The "Teman Bunda" pocket book assists parents in recognizing normal versus atypical development and provides information on factors to promote and monitor child development effectively.

## Conclusion

The conclusion of the study indicates that the "Teman Bunda" Pocket Book has a significant effect on improving mothers' knowledge about toddler's growth and development.

## Ethics approval and consent to participate

This study has received ethical clearance from the Health Research Ethics Committee (KEPK) of the Ngudia Husada Madura School of Health Sciences with reference number: 2257/KEPK/STIKES-NHM/EC/VII/2024.

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