

## The Baby Watch Book Improve Mothers' Knowledge About Infant Development

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### Abstract

The growth and development of children in Indonesia still needs serious attention. The rate of growth and development delays is still quite high. Providing health education by health workers is an effective way to deliver valid, updated and evidence-based information. The baby watch book can be used as an educational tool for the baby's mother, specifically designed to increase the knowledge and skills of the parents. This study was a pre-experiment study with a one-group pretest-posttest design. The sample was 30 mothers of infants at the Karang Taliwang Health Center. Data analysis used was the Wilcoxon Signed Rank Test. The results show that the majority of respondents were aged 20–35 years (80%), graduated from senior high school education (43.3%), working as a housewife (86.7%), and their main sources of information was health workers (23.3%). Before the intervention, most of the respondent has poor knowledge (50%). After given the intervention, there was an increase in their knowledge; there were 97% respondent have a good knowledge. Wilcoxon sign ranked test showed p-value 0.000 ( $p \leq 0.05$ ). This means that there was a significant effect of health education using baby watch book on mothers' knowledge about the development of babies aged 3 to 6 months.

**Keywords:** *Baby Watch book; Knowledge; Baby Development*

### INTRODUCTION

The Indonesian Pediatric Society in 2011 stated that the incidence of growth and development disorders in children aged 0-5 years had reached 3 million children. Every year, it is estimated that 5–10% of children born have developmental delays in general (Indonesian Pediatrician Association, 2013; UNICEF, 2013). Meanwhile, according to the World Health Organization (WHO), in 2011, almost 6.9 million children under the age of 5 died from malnutrition, respiratory infections, and diarrhea. These conditions will affect the growth and development of children (Padilla and Trujillo, 2015).

The development index in several countries in 2018, namely in Thailand reached 91.1%, in Vietnam it reached 88.7%, in Indonesia it was ranked 117th out of 180 countries in the world, which reached 88.3%, in Kazakhstan it reached 85.5%, and in Nepal it reached 64.4% of the total development index (Riskesdas, 2018).

Early detection and intervention are very helpful for optimal child growth and development. Therefore, the role of parents in the growth and development of children is very large (Soetjningsih, 2016). Early identification of developmental problems is not easy. Although severe abnormalities can be recognized from infancy, speech disorders, hyperactivity, or emotional disorders are difficult to diagnose before the age of 3 or 4 years (Arun, et al., 2018).

According to Pem (2015), if immediate intervention is carried out in a critical period (golden 1000 days), problems can be completely resolved and will maximize child development. Children can develop better cognitive and learning abilities, which will have a social, economic, and physical impact. Good DDTK implementation requires knowledge of the normal process of growth and development of children and the recognition of deviations.

Mother is the person closest to the child who provides care. A mother must be equipped with sufficient knowledge and skills to stimulate child growth and development. The quality of child growth and development is determined by family care, especially by parents. development. Based on Destian's 2017 research, which examined the mother's ability to stimulate the development of babies aged 3-6 months, it showed that early detection is important in finding growth and development disorders in children. Growth and development disorders that are found early will receive very valuable interventions to prevent permanent disability (Destiana, Yani, & Triatmi, 2017).

In addition, the provision of health education by health workers is an effective way to provide valid, updated, and evidence-based information. Various methods and media, such as lectures, leaflets, booklets, and various other educational media, can be used as tools to increase mothers' knowledge. Baby Watch book is one of the media in the form of a book designed with reference to KPSP and other references with an attractive appearance, easy to understand, and pictures related to the procedures to be carried out in health learning, which contains information on how to monitor the development of infants and toddlers. It is specially designed to increase the knowledge and skills of parents of babies and toddlers in monitoring the development of their babies and toddlers, so they can assess their own development.

Information regarding how to monitor a baby's development has been included in the KIA handbook. However, what distinguishes it from the baby watch book itself is that the baby watch book contains more complete information because the baby watch book adds monitoring of baby development at the age of 3-6 months using the KPSP, where the KPSP itself is modified again by adding more pictures so that it is easier for mothers to understand and capture information. about monitoring babies aged 3-6 months. Therefore, in this study, researchers used the Baby Watch book media to assess mothers' knowledge of the development of babies aged 3 to 6 months.

## METHODS

The research design used in this study is a pre-experimental quantitative research method using the One Group Pre test - Post test design. The population in this study amounted to 53 mothers who gave birth in April 2021 at the Karang Taliwang Health Center. The number of samples in this study used a minimum sample of 30 samples. The sampling technique is using purposive sampling. The independent variable in this study was health education using the Baby Watch book, while the dependent variable in this study was the mother's knowledge of the development of babies aged 3-6 months. This magic book is one of the media in the form of a book designed by researchers with reference to the Developmental Pre-screening Questionnaire from the Indonesian Ministry of Health. In this study, the level of knowledge was measured by using a questionnaire that had been tested for validity.

## RESULTS

This research was conducted in the working area of Karang Taliwang Community Health Center, from June to July, involving 53 mothers of babies who came to the Posyandu (a community service, provided monthly by the health center for expecting mothers, babies and toddlers with their mothers, and elderly). The results of the characteristics of the respondents were shown in the table 1.

**Table 1. The Respondents' Characteristics**

Category	N	%
<b>Age</b>		
<20 Years	1	3,3
20-35 Years	24	80,0
>35	5	16,7
<b>Education</b>		
No School	1	3,3
primary school	5	16,7
Junior high school	5	16,7
Senior High School	13	43,3
College	6	20,0
<b>Employment</b>		
Working	26	86,7
Does not working	4	13,3
<b>Resources</b>		
Electronic Media	7	23,3
Print media	1	3,3
Health workers	9	30,0
Posyandu cadres	7	23,3
family	6	20,0

Based on table 1, the majority of respondents are aged 20–35 years (80%), the last education is high school education (43.3%), working (86.7%), and the sources of information are health workers (30%).

**Table 2. The Results of A Mother's Knowledge About The Development Of Babies Aged 3 To 6 Months Before Being Given A Baby Watch Book Intervention**

Knowledge Level	Pre-Test	
	n	%
Good	6	20
Moderate	9	30
Poor	15	50
Total	30	100

Based on table 2 above, it can be seen that before the baby watch book intervention (pre-test) was given, most of the respondents had a level of knowledge in the less than category of 15 respondents (50%).

**Table 3. The Results of The Study Were Based on The Mother's Knowledge About The Development Of Babies Aged 3 To 6 Months After Being Given The Baby Watch Book Intervention.**

Knowledge Level	Post Test	
	n	%
Good	29	97%
Moderate	1	3%
Poor	0	0%
Total	30	100%

Based on table 3 above, it can be seen that after being given the baby watch book intervention (post-test), most of the respondents had a level of knowledge in the good category, as many as 29 respondents (97%), while the level of knowledge in the category of less did not exist (0%).

**Table 4 shows an analysis of the influence of mothers' knowledge about the development of babies aged 3 to 6 months before and after receiving a baby watch book intervention in the Karang Taliwang Health Center's working area.**

Variabel	Mean	SD	P Value
Pretest	56,7	19.88	0,000
Posttest	94,30	8.58	

Based on the Wilcoxon Signed Rank test using the SPSS25 program for the influence of mother's knowledge before and after being given an intervention using a baby watch book, the  $p$  value = 0.000 = 0.05. This means that there is a difference between the level of mother's knowledge before and that of after being given an intervention using a baby watch book.

## DISCUSSION

Observation on age, education, occupation, and information sources, resulted in most of the respondents are 25–35 years old, which affects the knowledge of respondents because they have a faster grasp of the information given, compared to mothers aged > 35 years. At the age of 20–35 years, is a productive age where a person's grasping ability is very influential on the knowledge they get (Isnaeny,2018).

The results of observations by researchers in the field suggest that most of the respondents have only a high school education. This affects the knowledge of respondents. However, most of the respondents were having children for the first time, so the experience they got was still small compared to mothers who already have many children, which is in line with the theory according to Mubarak (2011). Experience is something that has been experienced by someone in interacting with others environment. A person tries to forget a bad experience. On the other hand, if the experience is pleasant, then it is psychologically imprinted on one's psychological emotions and can form a positive attitude in life.

In this study, most of the respondents did not work. This is because work is very influential on knowledge, in that working mothers have little time with their children, so they do not know about their children's activities and also lack stimulation for growth and development in their children. When compared to mothers who do not work, they have more time to be with their children so that the baby will get optimal stimulation from their mother. Most respondents get sources of information from health workers. This affects the knowledge of respondents because, from the results of research observations obtained before the intervention, most mothers' knowledge was mostly in the poor category, which means that there is still a lack of information obtained from health workers about developments. so that the developmental stimulation given by the mother to her baby is not optimal.

Based on the results of the pre-test, it can be seen that before the baby watch book intervention was given, most of the respondents had a level of knowledge in the less category. This shows that mothers have less positive perceptions of objects or knowledge of baby development than fathers. This can be seen from the results of respondents or mothers who are dominant in answering questions

incorrectly from the questionnaires given to respondents, but from these results, there are still mothers who answer with correct answers.

This research is also supported by the theory of Syahrani, Santoso, and Sayono (2012), according to which one's knowledge of an object also contains two aspects, namely positive and negative aspects. These two aspects will ultimately determine a person's attitude towards a particular object. The knowledge can encourage someone to try to get more information about something that is considered necessary to be understood further or is considered important if fewer positive aspects are received. However, this is reversed if the less positive aspects of the object are known. It will grow a more negative attitude towards the object if more negative aspects are received. Lack of knowledge or information will affect a person's knowledge in determining someone's attitude to what is considered important (Hutagaol,2016).

Based on this research, it can be seen that after the baby watch book intervention (post-test) was given, most of the respondents had a good level of knowledge. This research is supported by research by Rathore (2014) and Fernandes (2013) that shows there is an increase in knowledge of mothers after being given health education with booklet media, indicating that information on booklet media is very effective for increasing knowledge of mothers.

However, in this study, the researchers used the baby watch book media, where the baby watch book itself has similarities with the booklet media, which is a book-shaped medium used in delivering health learning to parents of babies containing pictures, tables, and information about how to monitor the development of infants and toddlers. It is specially designed to increase the knowledge and skills of parents of babies and toddlers in monitoring the development of their babies and toddlers, so they can assess their own development.

Based on the results of the intervention using a baby watch book, which was carried out twice during home visits, respondents already understood the importance of baby development. After someone gets health education related to the development of the baby, the mother's knowledge of the development of the baby will increase, so that the mother is not worried about the development of her baby. Based on the results of calculations with the Wilcoxon Signed Rank test using the SPSS 25 program for the influence of mother's knowledge before and after being given an intervention using a baby watch book, the value of  $p = 0.000 = 0.05$ , which means there is an effect before and after being given an intervention using a baby watch book on mother's knowledge.

This is in line with Soetdjinarsih's (2017) theory that media are teaching aids that can basically help target educators accept learning by using their five senses. The more senses you use, the better you will receive the lesson. The kinds of media or aids include: auditive media, visual media, audio-visual media, media or aids based on their use, including: complex electronic aids, such as: films, slide films,

transparency, simple aids, such as: leaflets, picture book models, real objects (vegetables, fruits), blackboards, film charts, posters, dolls, phantoms, and banners.

This research is also supported by research by Yuli Yusuf et al. (2016), entitled "The Effect of Health Education with a Modeling Approach on Mother's Knowledge in Stimulating the Growth and Development of Infants Aged 0–6 Months Using the Wilcoxon Test." Research results from statistical tests obtained a p value of 0.000 0.05. The conclusion of this study is that there is an effect of health education with a modeling approach on mothers' knowledge in stimulating the growth and development of infants 0–6 months.

After the researcher conducts the research, the researcher can assume that health education about stimulating infant development is very appropriate to be given to parents who have babies. Education about child development using baby watch book media is very helpful for researchers in increasing mothers' knowledge about early childhood development. Through this health education, information can be provided to instill confidence in parents so that they know and realize the importance of efforts to stimulate growth and development from infancy, so that they can have a positive attitude and finally be able to do things according to the health recommendations given.

## CONCLUSION

Based on the results and discussion of the study, it can be concluded that there is a significant effect of health education using baby watch book on mothers' knowledge about the development of babies aged 3-6 months (P-value = 0.000).

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