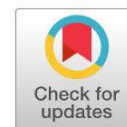


Effectiveness of flyer stimulation to mother skills in stimulating toddler development



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ABSTRACT

The development of a toddler is influencing by giving stimulate. According to Ministry of Health Republic of Indonesia in 2013, 16% toddler in Indonesia run into developmental disorder. Mother's active role is very influencing children development. Its needed effort to increase mother ability who have a toddler so they can fulfill balance stimulate according to the toddler stage. The purpose of this study was to determine the effectiveness of the use of flyer stimulation for mother skills in stimulating toddler development. This study was using a queasy experiment method with pre and post-test with a controlling group. The subject was a mother who has the toddler in the working area of Gang Kelor Primary Health Center Bogor. The intervention that was given by using development stimulatory flyer for intervention group, and using Mother and Child Health (MCH) book for control group. The sample was 30 respondents for each group which fulfill inclusion criteria. This study starts from June to Oktober 2017. Variable was measured by observation list. Data was analyzed by the Wilcoxon test. The result shows that there was significant difference in the mother's knowledge in the pre-test and post-test for giving stimulating using flyer (Mean difference= 27.70) and stimulating using MCH book (Mean difference= 7.47). Flyer development stimulation was more effective to increase a mother's skill to stimulate toddler development at age 1-3 years than using MCH book (p-value <0.005) The flyers was effective in improving mother skills in stimulating their babies.

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INTRODUCTION

The age under 5 years is an important period of growth development because at that range age there is an acceleration of children growth and development.(1) Toddler development is very dependent on parenting style. As for what is meant by parenting include stimulation needed so that children can develop optimally. Development is a process of increasing the ability and structure and function of the body more complex as a result and maturation of cells. According to Soetjningsih and Ranuh, development is influenced by the stimulation given to children. Based on the results of the study, currently, the active role of mothers in optimizing children's growth and development has been decreased.(2)

Based on data from the Ministry of Health of the Republic of Indonesia, 2013, 16% of Indonesian toddlers have developmental disorders, both fine motoric development, gross motoric, hearing disorders, less intelligence and speech delay. Lindawati's research in 2013 showed that maternal knowledge is one of the factors that influence gross motor development in toddlers, even though the study was an observational study

Though the stimulation action given by the mother is very influential on the child's growth and development. The results of the study showed that mothers who gave early stimulation optimally could significantly be affected to the development of children's motor skills.(3) Therefore, health efforts are needed to improve the skills of mothers who have babies and toddlers so that they can provide stimulation according to the stages of toddler age. One such effort is to provide health education on the importance of stimulation for children's development. So that optimal toddler development can be achieved. Health education can be delivered using a variety of media. The media used must be appropriate and adapted to the target conditions because the use of media can affect the absorption and retention of the material presented. The right media can increase retention (absorption and memory) a person's health message. In fact, the government has given to pregnant mothers *KIA (Kesehatan Ibu dan Anak - Mother and Child Health)* book that one of its contains about how to stimulate the development of a toddler.

Health workers including midwives have the task to facilitate understanding and application of *KIA* books by mothers, husbands, families and caregivers, and cadres.(4) However, considering the limited number of midwives and a large number of targets, the midwives have limited time in delivering maternal and child health education. While the mother and the family rarely read the book with a lazy excuse because the book is too thick. This condition is suitable with the results of Sistiarani's study (2014) and Oktariana (2015), that the *KIA* book proved to be ineffective in improving the knowledge of maternal and child health with a value of $p > 0.05$.(5)(6)

Aisya's research results in 2010 showed that knowledge affected health behavior in postpartum mothers. In this study the focus was on the post-partum education package rather than the media used to increase mother knowledge.(7) Lindawati's research in 2013 also showed that maternal knowledge is one of the factors that influence gross motor development in toddlers, even though the study was an observational study. (8)

Based on the conditions described, it is needed a simpler health promotion media to improve knowledge of maternal and child health. The study has shown that health promotion through assistive media such as flyers influences increase knowledge.(9) Flyers have simple shapes and attractive color combinations, flyers can be pasted so that many people can read them. The advanced of visual learning media for children development in this study is an examination the child by using pre screening developmental questionnaire for midwifery.

Through the flyer media, it is expected that the messages delivered will be easily remembered and understood, so that it can be applied in stimulating toddler development. From the results of the preliminary study, in 2 of Early Childhood Education Program in West Bogor area, there were 10% of children under five with dubious development and 5% of children under five with a developmental disorder.

Based on this background, we interest in studying about "Effectiveness of Flyer Stimulation to mother skills in stimulating the development of Infants and Toddlers". The purpose of this study was to determine the effectiveness of the use of flyer stimulation for mother skills in stimulating toddler development.

METHOD

This study was using a quasi experiment method with pre and post-test with control grouping. Measurements were taken before and after the intervention to intervention group and control groups. The interventions of this study were given health

education through media support flyer stimulation of toddler development that could be attached to the wall. subjects of this study were mothers who had toddlers in the work area of Gang Kelor Health Center, Bogor City. The location was chosen because it was a densely populated urban area and from the results of preliminary studies there were several children with developmental and growth disorder. This study starts from June to Oktober 2017. Total samples for both groups, intervention group, and control group were 30 respondents. The sample was counted using a sample size formula for unpaired categorical analytical research by Dahlan. (8) The result of calculating get total sample size is 27.14 respondents, to an anticipation of the subject being resigned during the study, the number of samples was added by 10%, bringing the total to 29.7 people rounded up to 30 subjects. Inclusion criteria: minimal basic education was Junior high school; the mother in good condition; infant around 12-36 months; mother lives with an infant, and mother was played a role for parenting. Exclusion criteria mother has a reduced function or loss of function in one of the senses. This study was ethically approved by the Ethic Commission of the Health Polytechnic Bandung.

The data needed in this study (mother skills in stimulating toodler development) were primary data taken directly from the results of interviews using questionnaires and observations of child development. Data was taken 2 times in 2 different groups, with pre and post-test data in the intervention and control groups in the 1-month interval. The data collection, respondents were given an explanation and informed consent. After the pre-test about ways to fulfill the stimulation of infants and toddlers, then an intervention due to the mother. The intervention in this study was giving health education on how to stimulate toddlers through flyers. After 1 month, the respondent followed a post-test.

In the post-test, researchers will provide feedback regarding stimulation that had been done by the mother. Through this method, the mother was expected will evaluate herself about the stimulation she had done. The study instrument was a skill observation sheet that has been adapted from the Indonesian Ministry of Health's *KIA* and *SDIDTK* (*Stimulasi Deteksi dan Intervensi Dini Tumbuh Kembang*-The Early Stimulation, Detection, and Intervention of growth-development) books. The data was analyzed to describe the frequency of the various variables studied, both independent and the dependent variable, and also to describe the influenced of flyer stimulation on the optimization of toddlers' growth and development in the city of Bogor, used non paired t-test formula. This type of test was used to analyze the two comparisons which consist of categorical and numerical data.(10)

RESULTS

The following were the results of the study, can be seen in the Tabel 1 through 4.

Characteristics of Respondents

The results showed that most of the respondents both in the intervention group and the control group were mostly last education from junior high schooled, not working, having 2 children, and aged 20-35 years. For more details, the characteristics of respondents can be seen in Table 1 below.

Table 1. Characteristics of Respondents

Variable		Groups		Total
		Intervension	Control	
Last Education	Junior High School	17	18	35
	Senior High Shool	12	10	22
	University	1	2	3
Occupation	Working	2	4	6
	Not Working	28	26	54
Number of Children	1	10	9	19

	Variable	Groups		Total
		Intervension	Control	
Age	2	13	15	28
	3	7	6	13
	20-35	23	24	47
	>35	7	6	13

Skills of Respondents Before and After Intervension

Based on Table 2, there was an increase in the average value in the intervention group of 27.7 points between before and after being given an intervention about health education through stimulation flyer media.

Table 2. Distribution of Skills Stimulation Respondents

Skills of Respondent	Control Group			Intervension Group		
	Mean	Std. Deviation	Range	Mean	Std. Deviation	Range
Pretest Score	54,00	20,091	17-83	53,37	21,110	17-83
Post test Score	61,47	19,017	20-83	81,07	11,182	83-100

Based on Table 3, it is known that in the intervention group there were 11 respondents who initially lacked skills become good skills.

Table 3: Distribution of Respondent Stimulation Skill Categories

Skill Categories	Group		Total	
	Intervension	Control		
Pre test	Poor	14	15	29
	Good	16	15	31
Post-Test	Poor	3	17	20
	Good	27	13	40

Effectiveness of the Development Stimulation Flyer

The results of the Wilcoxon test can be seen in Table 4. From the table, it can be seen that in the intervention group there were 27 respondents who had a post-test score is higher than a pre-test score, and there were no respondents who get a decrease in post-test scores.

Table 4: Changes in Respondents' Skills

Change in Respondents skills	Group		p-value
	Intervension	Control	
a. Post test score < Pretest score	0	2	<0.005*
b. Post test score > Pretest score	27	20	
c. Post test score = Pretest score	3	8	
Total Respondents	30	30	

*with Wilcoxon test

Based on Table 4, it is also known that developmental stimulation flyers are effective in improving mother skills in stimulating their babies with $p < 0.005$.

DISCUSSION

Characteristics of Respondents

Based on the results of the study showed that most of the respondents both in the intervention group and the control group were mostly last education was junior high school, not working, having 2 children, and age between 20-35 years. Today, aspects of child development is one aspect that must be considered, because it is an aspect that explains the process of forming a person, physically and psychosocially. Some parents do not understand this, especially parents who have relatively low levels of knowledge and socio-economic. The assumption that as long as the child is not sick, the child does not have growth and development disorder.(11)

Parents, especially mothers, are the right place to get love, attention, and care as they should be able to apply the right parenting style, skilled as influences and educators. Parents should understand that they are the main responsible for the gross motoric development of their children. The success of a child's education is usually associated with the personal development of his parents, especially the mother and whether or not the relationship of communication and role models (concrete examples) in the family.(12)

According to Wina (2012), maternal skills about early detection of growth and development play a very important role because with good mother's skills and knowledge, baby monitoring can be doing well.(13) The increasing age, education, and skills of women and the development of the economy make employment for women in various fields and more women work outside the home including mother. This has resulted in more mothers not paying attention to the child's growth and development.(13)

According to Tjandrajani (2012) The level of education will influence the mother's knowledge about giving stimulation which will affect the mother's behavior in giving stimulation to children, how to educate and how to care for children, and how to solve problems.(14) From the results of research by Fera et all (2016), factors of maternal characteristics such as education, employment, socio-economic and knowledge significantly influence the ability of mothers to stimulate the growth of their baby's motoric (15). Likewise with Herlina's Research (2015) shows there is a relationship between education level and mother's knowledge of gross motor development in pre-school age children. (16)

Respondent skills before and after intervention

From the results of the study, it can be seen that there is an increase in the average value in the intervention group before and after being given an intervention in the form of health education through stimulation flyer media.

Based on the results of a study from Sumiyati (2016) and Wardani (2017), the results showed that there was a significant relationship between stimulation and child development.(17)(18) Therefore in every stage of child development needs stimulation to get the optimal stage of development according to age. The process of child growth and development needs to be stimulated by parents so that children can grow and develop optimally and according to their age. Parents must realize the importance of giving stimulation for child development.(11) Less stimulation in children can lead to social disorder, emotional and motoric behavior in children.

Families, especially mothers, need to have the skills to increase stimulation, especially speaking-language aspects and self-reliance to stimulate children's developmental abilities. So it is necessary to do educational efforts to mothers of toddlers about giving stimulation to stimulate the child's basic abilities. It is also in accordance with the opinion of Vienna (2012), that maternal skills about early detection of growth and development play a very important role because, with good skills and knowledge of the mother, it is expected that baby monitoring can be done well.

In reality, in many fields, there are still many mothers who do not have knowledge in stimulating child development. As the result in the study of Herlina (2015) and

Munawaroh (2015) that tell more than 50 percent of mothers to have less knowledge in stimulating child development.(16) So that in order to support children's development, parents must understand the concept of child development. (19) There are limited information, assistance, and facilities given from various media related to child development, it is necessary to have information for parents, for example by giving counseling will increase parents' knowledge even though the level of education is low or high so they can give support according to the development stage.(16)

From the results of this study, mothers who previously had fewer skills in stimulating child development, apparently after being given guidance with Flyer media there was an increase in skills. This result suit with Notoatmodjo's statement, 2012, that knowledge or skills can increase from direct experience or through the experience of others. Knowledge or skills can be improved through counseling both individually and in groups for increasing health knowledge that leads to improving the behavior of individuals, families, and communities in realizing an optimal degree of health.(20)

Therefore it can be concluded that by giving intervention guidance on how to stimulate children there will be a change in maternal behavior to stimulate children.

Effectiveness of Flyer Stimulate Development

From the results of the study, it was found that the development stimulation flyer was effective in improving maternal skills to stimulate toddlers.

Under five years of age (toddlers) is an important period in the process of growth and development because in this age range there is an acceleration of child growth and development. (18) Toddler development depends on parenting parents. As for what is meant by parenting include stimulation needed so that children can develop optimally. Development is a process of increasing the ability and structure and function of the body more complex as a result and maturation of cells. According to Soetjningsih and Ranuh, development is influenced by the stimulation given to children. Based on the results of the study, currently, the active role of mothers in optimizing children's growth and development has been decreased.(21)(2)

Based on data from the Ministry of Health of the Republic of Indonesia, 2013, 16% of Indonesian toddlers get developmental disorders, both fine motoric development, gross motoric, hearing disorder, lack of intelligence and speech delay. Though the stimulation action given by the mother is very influential on the child's growth and development. The results showed that mothers who gave early stimulation optimally could significantly affect the development of children's motor skills. (3) The results of the study by Sumiyati (2016) and Wardani (2017) found that there was an effect of giving stimulation on the child's development status.

According to Nursalam, stimulation is part of the child's basic needs, it is sharpening. By honing children's abilities continuously, children's abilities will increase. Giving stimulation can be done with exercise and play. Children who get directed and regular stimulation will develop faster than children who lack stimulation.

In family life parenting issues and giving stimulation in children are generally put emphasis on the role of a mother who is most responsible, because the women most at home and hang out with their children at home. But there are still many parents who think that parenting skills and stimulating children are naturally owned when the time comes. Even though knowledge about how to give stimulation and these skills must be properly learned and understood by every parent. One function of stimulating play for children is to stimulate intellectual development (kognitif), where children will explore and manipulate everything that exists surrounding environment. In this case the behavior of parents in the form of knowledge, attitude and practice about stimulation play is one of the important factors in helping to optimize child growth and development because of good knowledge and skills about playing stimulation, parents can better understand how to care and educate their children with good (19)(22)

Therefore, health efforts are needed to improve the skills of mothers who have babies and toddlers so that they can give stimulation according to age stages of the toddler. One of these efforts is to provide information about the importance of stimulation for children's development. So that optimal toddler development can be achieved.

According to Anandika's study in 2015, there is an influence of maternal behavior to growth dan development stimulate for children aged 3 and 4 years before and after counseling.(23) As well as the results of Anggraeni's study (2015) showed that there was an effect of stimulation module learning to maternal skills in stimulating toddlers' growth and development. From the results of a study by Anandika (2015) and Anggraeni (2015), it is proven that giving counseling both with the media or without media can change the mother's skills in stimulating child development. (23)

The flyer in this study is a counseling media that aims to improve the retention (absorption and memory) of a person to health messages. The flyer is a sheet of paper that contains writing with short sentences, solid, easy to understand and simple pictures, used to provide a brief description of a problem.(24) The advantage of a flyer is to attract the senses and interest because it is inspiring the visual senses. The computer research and publishing institute, Computer Technology Research (CTR), states that people are only able to remember 30%. Research shows that health promotion through assistive media such flyers will influence to increase knowledge.(9)

As a health promotion media, flyers have several advantages, including relatively inexpensive costs, contain complete information, and are easy to carry, the target can set the time in reading, can repeat the reading again and arrange how to read, this media can be reviewed, The reader can calmly, read carefully the message that is delivered and can read back the parts that are wanted or that have not been understood. Through the flyer media, it is expected that the message delivered will be easy to remember and understand, so that it can be applied in stimulating the development of toddlers. In this study flyer media is made in the form of a fan, accompanied by images to be more easily understood, and made of thick waterproof paper. It is expected that the respondents are interested to read and practice it.

CONCLUSION

Flyer stimulation effectively improve maternal skills in stimulating the development of infants and toddlers. Before being given a flyer, most mothers have less skills in stimulating the development of infants and toddler. After being given a flyer, most of the mothers have good skills

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