



The Effectiveness of Posters as A Media for Monitoring and Stimulation of Children's Growth and Development

Eliyana Lulianthy^{1*}, Tilawaty Aprina², Dwi Khalisa Putri³, Intan Purnamasari⁴

¹²³⁴Program Studi DIII Kebidanan, Politeknik 'Aisyiyah Pontianak, Kalimantan Barat, Indonesia

Abstract

Disorders of child growth and development have an impact on morbidity throughout the child's life cycle, transmission of poverty between generations and long-term effects that can hinder the pace of development of a country. Nevertheless, as recorded in the 2018 Early Childhood Development Index, more than 95% of early childhood children in Indonesia have physical and learning abilities that are appropriate for their age and stage of development. However, the development of numeracy literacy and emotional social skills are still below 70%. Thereby, knowledge, attitudes and behavior of parents were correlated with the level of stimulation of growth and development in children. Therefore, this mixed method pre-experimental study aimed to investigate the effectiveness of the "Healthy Child Poster" on the knowledge, attitudes and behavior of parents in monitoring and stimulating children's growth and development. One-Group Pretest-Posttest design was applied to test the sample determined by the Accidental Sampling technique following the specified inclusion criteria. The results showed an increase in the average values of knowledge, attitudes and behavior of mothers in monitoring child growth and development after being given healthy child posters. In addition, the mothers interviewed in this study found that the posters hung on the walls of their homes were always visible and reminding, thus helping them to easily understand the messages conveyed. Therefore, promotive and preventive strategies in monitoring and stimulating children's growth and development need to be improved to strengthen the knowledge, attitudes and behavior changes of parents.

Keywords: posters; children growth and development ; monitoring; stimulation

^{1*}**Corresponding Author:** Eliyana Lulianthy (email eliyana.lulianthy@polita.ac.id), Jalan Ampera No.9, Pontianak, Kalimantan Barat, 78114

Introduction

The population of children makes up an immense portion of a nation's next generation. Particularly, the composition of children aged 0-5 years old makes up 21.6% of the total population of people aged 0-17 years (Kementerian Pemberdayaan Perempuan dan Perlindungan Anak, 2019). Therefore, it is out of questions that children as development assets require large investments in health, education and welfare. Accordingly, the Indonesian government is committed to achieving the 2030 Sustainable Development Goals (SDGs) related to the growth and development of Indonesian children. The government furthermore sets the main targets for the growth and development of Indonesian children such as alleviating poverty in children, maintaining the condition of no child being malnourished and dying from incurable diseases, creating a child-friendly environment, fulfilling education for children, especially early childhood education and so forth (Kementerian Pemberdayaan Perempuan dan Perlindungan Anak, 2019).

Both education and care given for children from birth to the age of 6 years determine and have a significant influence on the growth, development and learning potential of children in the future (United Nations Children's Fund, 2020). Several studies confirm that the developmental stage in the first 3 years of a child's life is

the most important phase because it will determine the child's future (da Cunha et al., 2015; Ticusan, 2012). In addition, studies from various fields of science regarding the importance of early childhood growth and development on health and productivity throughout life (Ertem et al., 2018). Besides, Children who have good social and emotional development will gain the confidence and competencies needed to build relationships, solve problems and cope with emotions (Darling-Churchill & Lippman, 2016).

Delayed child's development is one of the problems that occur in low-middle income countries. Around 250 million children aged less than 5 years are at risk of not being able to achieve maximum development (World Health Organization, 2018). Despite the global insignificant figure, the achievement of Indonesia's Early Childhood Development Index (ECDI) in 2018 indicated a relatively good picture with a score of 88.30 on such dimensions as numeracy literacy, physical ability, social emotional ability and learning ability where each dimension has a strategic role in shaping ECDI. Surprisingly, according to a report from Statistics Central Bureau in 2020, more than 95% of early childhood have physical and learning abilities that suit their age ranges and development stages. However, achievements in the development

of numeracy literacy and social emotional abilities are still below 70% or 64.60 and 69.90 respectively (Badan Pusat Statistik, 2020). Disrupted growth and Development in children will inevitably contribute to morbidity throughout the child's life cycle, the transmission of poverty among generations. In which the long term can restrain the pace of development of a nation. Given that children are an important element for the sustainability of a nation and the state, creating a superior generation from an early age is absolutely necessary (Kementerian Pemberdayaan Perempuan dan Perlindungan Anak, 2019).

Sanders and Cozier's research (2018), entitled "How do informal information sources influence women's decision-making for birth? A meta-synthesis of qualitative studies" found that As technological advances, various media are created, and information obtained from these media influence knowledge, increase one's awareness and encourage behavior. According to Sanders & Crozier, information obtained from either formal or non-formal education can have short-term and long-term effects resulting in changes or increases in knowledge (Sanders & Crozier, 2018).

Another study regarding the use of poster media for education by Ulya (2018) entitled "The Effect of Health Education with Media Posters on Knowledge of Hypertension Management in Hypertension Sufferers" found that Health education media used in this research were Posters. Ulya and colleagues define a poster as medium used to present information in a visual form and stimulate the sense of sight. In other words, its use aims to present information in an attractive and easy-to-understand form, and it can be also used as a reminder (Ulya et al., 2018). In addition, posters can be pasted in strategic places making it easier for passers-by to see and read them. To illustrate, when they read a poster many times, the information conveyed through the poster can be understood and is expected to increase knowledge and motivate the readers to follow the information contained in it (Da Costa, 2021; Oktavidiati et al., 2019; Ulya et al., 2018).

The results of previous research are in line with the research that I have done, that parents must possess the knowledge, attitudes, and behavior so that they can monitor and stimulate the growth and development in their children. Particularly, knowledge based-behavior would last

longer. Ideally, parents with sufficient knowledge have a strong commitment to provide the best education and stimulus for their children in terms of the quality and quantity of intensive meetings (Lulianthy et al., 2020). Therefore, for this reason, this study aims to investigate the effectiveness of posters of healthy children in order to increase knowledge, attitudes and behavior of mothers in independently monitoring and stimulating children's growth and development at home. The novelty of this study is that researchers make posters as a media for parents to monitor and stimulate growth and development in children at home. This media is expected to increase parental awareness and knowledge regarding growth and development as well as early detection of delays in child growth and development.

Method

The research design used in this study was a mix method research. The quantitative analysis used pre-experimental study with a One-Group Pretest-Posttest Design and qualitative analysis used phenomenological research. The group was given treatment and then the results were observed. The population in this study were all mothers who had children aged 3

months - 4 years in the working area of the Sungai Burung Village Health Center, Segedong sub-district, Mempawah Regency. The samples in this study were mothers who visited the *Posyandu*, Integrated Healthcare Center, in the working area of the Public Health Center of Sungai Burung Village, in Segedong sub-district, totaling 25 people. Sampling was carried out using an Accidental Sampling technique which means that the participants were involved based on the meeting by chance in the healthcare center. The respondent who happened to be present or available at the time of this study was carried out. Meanwhile, the participant-inclusion criteria consisted of some aspects such as (1) freely giving their consent, that they were willing to participate by their own will, (2) having children aged 3 months to 4 years old, (3) having ability to read and write, (4) parent(s) accompanying children at *posyandu*, it could be a mother or a father.

The research began with an introduction with mothers who happened to come to the *Posyandu* during the activity. Before conducting the pretest, the researchers distributed an informed consent form to each mother. They are given time to read and make a decision regarding participation. Afterwards, the researchers conducted a

pretest activity by distributing questionnaires to the mothers who had given their consent to participate in this study. The questionnaire was related to Monitoring and Stimulation of Growth and Development in Children, especially with the help of posters of healthy children. The activity ended with a sharing session as well as a question and answer session. This study was conducted for 3 months where observations were made on the use of posters as a medium for monitoring growth and development in children. In the next process, the use of healthy children posters was evaluated. In this regard, the evaluation was carried out with the help of *posyandu* cadres, and the researchers also directly engaged in a communication with the respondents.

The research data was then statistically tested using the Wilcoxon-signed rank test. That is to find out whether using posters of healthy children as an informative medium has an effect on test scores before and after the intervention.

Result and Discussion

1. Characteristics of Respondents

The data in table 1 (one) shows that of the 25 respondents, 64% of mothers aged 20-35 years and more than 80% are

housewives. While more than 50% are children over 1 (one) year old.

2. Knowledge, attitudes and behavior of respondents regarding growth and development of children

Table 2 (two) presents the increase in the average score on the knowledge, attitudes and behavior scores of respondents regarding monitoring and stimulation of growth and development in children after being given the Healthy Children Poster media. The p-value result is 0.000, which means that posters can effectively be used as a medium in increasing the knowledge, attitudes and behavior of mothers in monitoring their child's growth and development.

3. Using Posters to monitor children's growth and development

The results of interviews with respondents stated that the posters had been pasted and used, as stated in these following interview excerpts:

"ya sudah bu, udah d isi smua" (Inf 2) (Yes, it's been done mam, all has been filled in)

"Iya kemarin sempat di tempel di dinding kamar, sama mereka kakak beradik di coret, saya sibuk di dapur." (Inf 6) (Yes, yesterday it was actually pasted on the bedroom wall, (but) it was scratched by

the brothers and sisters, when I was busy in the kitchen)

The researchers also asked the informants whether they found it difficult to use and understand the posters as expressed in the following interview excerpts:

"Alhamdulillah tidak bu. Biasa posyandu juga ada tanya jawab sama bidan tentang kesehatan anak-anak." (Inf 6) (Alhamdulillah, it's not (difficult) ma'am. As usual at the posyandu, there is also a question and answer session with the midwife about the health of children).

"Alhamdulillah tidak ada" (Inf 7) (Alhamdulillah, there isn't any)

"Alhamdulillah, Aman bu tanpa kendala" (Inf 8) (Alhamdulillah, it's secured Ma'am without any obstacle)

In addition, the informants revealed that there are differences in behavior in monitoring children's growth and development using healthy child posters and the KIA (Maternal and Child Health) book:

"Iya bu. Apa lagi setelah pulang dari posyandu, langsung liat grafik BB sama TB, ya alhamdulillah masih normal. Untuk saya pribadi poster ini sangat membantu dalam tumbuh kembang anak. Memang di buku panduan juga ada, cuma kalau buku kita harus punya waktu khusus buat baca, ya kalau poster tinggal di gantung di dinding setiap waktu bisa di liat." (Inf 6) (Yes ma'am.

Especially, after returning from the posyandu, I immediately saw BB (weight) and TB (height) and thank God they were still normal. Personally, I feel that this poster is very helpful for children's development, it can also be found in manuals, but it requires special time to read it, while the poster can simply be hung on the wall, and can be viewed anytime).

"Paling suka baca-baca jak bu. Apa yang belum dan udah dia bisa. Nggak. Buat pergi ke posyandu aja bukunya." (penggunaan Buku KIA) (Inf 4) (I just really like reading, ma'am. What he hasn't and has done. Not just simply taking the book to Posyandu." (the use of MCH book))

"Iye buk, jadi lebih tau lagi" (Inf 5) (Yes ma'am, so, I know more)

"Sebelum ade poster saya hanya cek perkembangan melalui posyandu setiap bulannya" (Inf 8) (Before the poster, I only checked the progress through the Posyandu every month)

Growth and development in children is the main goal of the family and society. The first 3 years of a child's life is the most important developmental stage because this phase determines the future of a child (da Cunha et al., 2015; Ticusan, 2012). Government has been long involved in monitoring growth and development in children and has regulated policies related to that issue. However, there are still many

problems in its implementation. Knowledge, parental attitudes and behavior are crucial in order to be able to monitor and stimulate the growth and development in children. Meaning, parents with sufficient knowledge commit strongly to the efforts to give the best education and stimulus for their children in terms of the quality and quantity of intensive meetings (Lulianthy et al., 2020).

The results of the analysis showed that there was an increase in knowledge, attitudes and behavior of mothers in monitoring child's growth and development. This is indicated by the differences in the average scores of parents' knowledge, attitudes and behavior after using the Healthy Children poster as a medium of information.

The results of the interviews also support the results of data analysis. Respondents stated that on average, parents have not used the child development monitoring book optimally. In addition, monitoring books are mostly used for recording immunizations or posyandu visits. The findings of this study confirm previous research findings which state that the Child Health Card has not been used as a monitoring tool for children's health, growth and development. Over time,

preventive visits were gradually replaced by visits due to health problems (Abud & Gaíva, 2015; De Almeida et al., 2016; Lulianthy et al., 2020; Rambe & Sebayang, 2020). Meanwhile, respondents admitted that with posters they frequently monitor and stimulate their child's growth and development. Because the posters are affixed to the walls of the house, it is always easy for mothers to see when they are on the move.

Similarly, the results of this study affirm the findings by other studies that posters used as an informative medium has a positive influence on a person's knowledge, attitudes and behavior. The results of Michelle E. Lee's research (2021) entitled "What's in Your Drink? Poster Educates Families About Sugar Content and Fatty Liver Disease" found that the use of educational posters in clinics can increase awareness of the sugar content in drinks and most of the respondents reported an intention to reduce consumption of sweet drinks in children (Lee et al., 2021). Furthermore, a study by Suriadi (2017) found that using posters as a medium to inform elementary students at SDN 003 Palaran City of Samarinda about diarrhea prevention significantly affected knowledge of the students (Suriadi & Kurniasari, 2017).

Likewise, Zainal and colleagues in their study (2021) found that there was a difference in pre-test means 52.1 SD 5.332 and post-test means 87.4 SD 12.351 with an average difference of 7.019 knowledge. This shows that there is a difference in the average difference between knowledge before treatment and after treatment with the poster education method (Munir et al., 2021).

Posters can be a preventive medium in the world of health. Using eye-catching images and easy phrases posters can easily communicate and convey the message to target audience. That posters with visual elements in the form of lines, pictures and words, it is expected to attract the interest and attention of the target to read the information (Abqari et al., 2022; Caris et al., 2018; Horn et al., 2022; Sumartono & Astuti, 2018). Besides, posters can be pasted in strategic places making it easier for someone to see and read. To illustrate, if someone reads a poster many times, the information conveyed through the poster can be understood and is expected to increase knowledge and motivate the person to follow the information contained

in it (Da Costa, 2021; Oktavidiati et al., 2019; Sumartono & Astuti, 2018; Ulya et al., 2018).

Parental knowledge, according to Susilawati and colleagues, correlates with the level of stimulation for growth and development in children, where the higher the knowledge is, the more often parents monitor the growth and development of children, and vice versa (Susilawati et al., 2017). In line with the research findings above, the results of interviews in this study found that with the poster media, parents became more concerned about their child's growth and development. In particular, posters help mothers recognize and understand the process of child growth and development. They also know what should be stimulated, especially, because the stages of child development are grouped according to age. Therefore, the use of posters as a medium for parental education about the growth and development of their children is expected to increase the knowledge, attitudes and behavior of parents in monitoring their child's growth and development independently at home.

Table 1. Respondents Characteristics

Respondents Characteristics	Number	%
Mother's Age		
< 20 yo	1	4
20 – 35 yo	16	64
> 35 yo	8	32
Mother's Occupation		
Housewife	22	88
Private employee	1	4
Civil Servant	1	4
Others	1	4
Mother's Educational Background		
Elementary School	8	32
Junior High School	7	28
Senior High School	9	36
Graduate Degree (s)	1	4
Child's Age		
<1 yo	12	48
>1 yo	13	52
Total of Respondents	25	100

Table 2. Knowledge, Attitudes, Behavior of Parents regarding Monitoring and Stimulating Child's Growth & Development

	N	Mean Rank	Z	Asymp. Sig. (2-tailed)
Knowledge				
Pre – Post test				
<i>Negative Ranks</i>	0 ^a	0.00	-4.394	0.000
<i>Positive Ranks</i>	25 ^b	13.00		
Attitude(s)				
Pre – Post test				
<i>Negative Ranks</i>	0 ^a	0.00	-4.378	0.000
<i>Positive Ranks</i>	25 ^b	13.00		
Behavior				
Pre – Post test				
<i>Negative Ranks</i>	0 ^a	0.00	-4.429	0.000
<i>Positive Ranks</i>	25 ^b	13.00		

Conclusion

The results of this study indicate that there is an increase in the average values of knowledge, attitudes and behavior of mothers in monitoring children's growth and development after being given a healthy child poster. Therefore, health promotion strategies regarding monitoring

and stimulation of children's growth and development need to be improved to strengthen parents' knowledge, attitudes and behavior changes. Given that the use of the appropriate media can make it easier for parents to access the latest information, this information delivery technique is worth implementing by the government, policy makers, health workers, the community and

parents, especially in the field of child health in West Kalimantan in particular and in Indonesia in general. Moreover, with various preventive media, the government, health workers, the community and parents can prevent the failure of children's growth and development by continuously monitoring the health, growth and development of children, anywhere and anytime, without limitations of space and time.

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