



Literature Review

UTILIZATION OF MATERNAL AND CHILD HEALTH (KIA) BOOKS IN PROVIDING STIMULATION FOR CHILD DEVELOPMENT

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Abstract

Background: Based on WHO data in 2017, the Neonatal Mortality Rate (NAR) reached 18/1000 live births, and the Under-five Mortality Rate (IMR) reached 39/1000 live births. IMR and IMR must be anticipated in relation to the increase in children who have developmental problems. According to Riskesdas data (2018), the total development index of children aged 36-59 months in Indonesia is 88.3%. The lowest development index is literacy, at 64.6%, followed by social-emotional (69.9%), learning (95.2%), and physical (97.8%). The MCH book is one of the instruments that can be used to stimulate child development.

Objective: To conduct a review of several literatures related to the influence of the use of KIA books in providing stimulation for child development.

Method: This study uses a literature review that examines the concepts and theories related to the use of MCH books in stimulating child development. The number of articles reviewed is four.

Results: The MCH book can be used as one of the instruments to stimulate toddler development. After receiving health education through the MCH book, there was an increase in mothers' knowledge about stimulating child development.

Conclusion: The MCH book is one of the tools that mothers can use to stimulate child development, enabling them to detect early signs of stunted child development and treat it promptly to overcome growth and development issues.

Keywords: Utilization, MCH book, child development

Background

Growth and Development are an inseparable unity, because growth is part of development, and everything that grows must develop. Every human being will grow and develop from the time he is in their mother's womb until they are born into the world. Humans will continue to experience very significant growth and development. Moreover, the golden age that occurs in early childhood, 0-6 years, is an age that greatly determines how children will be in the future. As a child grows older, there are

simultaneous changes in growth and development, making these two events crucial in a child's life (1).

According to data from the World Health Organization (WHO), in 2017, the Neonatal Mortality Rate (NMR) was 18 per 1,000 live births, and the under-five mortality rate (U5MR) was 39 per 1,000 live births (2). The results of the 2017 Indonesian Demographic and Health Survey (SDKI), the neonatal mortality rate (NMR) was 15/1,000 live births,

the infant mortality rate (IMR) was 24/1,000 live births, and the under-five mortality rate (U5MR) was 32/1,000 live births. IMR and U5MR must be anticipated in relation to the increase in children who have developmental problems (3).

The total number of toddlers in Indonesia in 2019 was 29,322 people (4). The World Health Organization (WHO) states that children must be able to achieve optimal physical growth and psycho-emotional development. As many as 250 million, or 43%, of children in low- and middle-income countries cannot fulfill their child's development potential (5).

According to the Indonesian Basic Health Research 2018 (Riskesdas), the total development index for children aged 36-59 months in Indonesia is 88.3%. The lowest development index is literacy, at 64.6%, followed by social-emotional (69.9%), learning (95.2%), and physical (97.8%). A study in Indonesia showed that 20-30% of toddlers experience developmental disorders, most of whom experience delays in gross motor and language/speech aspects, which are caused mainly by a lack of stimulation (6).

Early detection of growth is crucial for determining normal growth and identifying deviations early. Early stimulation refers to the stimulation that occurs from the moment of conception, every day, to stimulate all sensory systems, including hearing, sight, touch, smell, and taste (1). One of the efforts made by the government to increase children's potential is through the Implementation of Early Growth Stimulation, Detection and Intervention (SDIDTK). Comprehensive and coordinated SDIDTK toddler activities will enhance the quality of toddler growth, development, and readiness to enter formal education. Indicators of the success of toddler growth and development guidance include not only increasing the health and nutritional status of toddlers but also promoting their mental, emotional, social, and independent development. Child development guidance organized through stimulation activities, detection, and early intervention of toddler development deviations requires instrumental devices (1).

One method that can be used for screening and monitoring child development is the MCH Book, along with the SDDTK method (Early Detection of Growth and Development), which utilizes the Pre-Screening Development Questionnaire (KPSP) instrument. Comprehensive and coordinated stimulation

activities, detection and early intervention of toddler development deviations are organized in the form of partnerships between families (parents, child caregivers, and other family members), communities (cadres, community leaders, professional organizations, non-governmental organizations, and so on) with professional personnel (health, education, and social), will improve the quality of early childhood growth and development and readiness to enter formal education (1).

The coordinator of midwives in the community health center (puskesmas), assisted by the village or sub-district manager monitors the implementation of the MCH Book, integrated with other MCH programs. This aims to assess the continuity and improvement in the quality of use and utilization of the MCH Book, and identify obstacles and supporting factors for its use at the community and cadre levels (7). There is a significant difference in the scores for knowledge and attitudes of mothers regarding child growth who receive intensive counseling using the 2017 edition of the MCH Book (8). The results of other studies also show that there is a significant association between assistance using the MCH book and the growth of children under two years of age (p value = 0.000), and there is an association between assistance using the MCH book and child development (p value = 0.000) (9). The MCH book is one of the instruments that can be used to stimulate child development. However, not all mothers utilize the MCH book. It is the reason researchers want to conduct a literature review on the utilization of the MCH book in providing.

Subjects And Method

This study aims to determine the effect of using MCH books on providing stimulation for child development, based on several previous articles, particularly those published in various scientific journals. The type of data in this study is secondary data. The secondary data in question are the results of research conducted by previous researchers. The sources in this study were drawn from four articles published in scientific journals. The sources of the articles used were obtained from Google Scholar, with keywords such as development stimulation, MCH handbook, KIA books, and child development used to collect relevant journals.

Results

1. Compare

The similarity between these four articles is that they discuss the use of MCH books in stimulating child development.

2. Contrast

The differences between these four articles lie in the research design employed, the research sample, the sampling technique used, and the research findings. The following are the differences in the research:

- a. Hasanah and Fitriani (2018) employed a cross-sectional research design with a simple random sampling. The sample in the study consisted of mothers with babies under 2 years old, totaling 48 mothers. The study's results showed a significant relationship between assistance using the MCH book and child development ($p\text{-value} = 0.000$) (9).
- b. Umiyah, et al. (2019) used a quasi-experimental pretest-posttest group design. The sample in the study consisted of 60 mothers, divided into a treatment group and a control group of 30 mothers each, all of whom had children aged 0-3 years. The sampling technique used was random sampling. The study's results showed a significant difference in the development of toddlers aged 0-3 years in the treatment group, who received counseling on completing the KIA book with their mothers regarding child stimulation and development (10).
- c. Herlina (2018) used a cross-sectional design. The sample in this study was all mothers of babies aged 3-12 months in Cepoko Village, Panekan District, Magetan Regency. The study's results showed no

relationship between the application of stimulation using KIA books and infant development (11).

- d. Lutfiya, dkk (2019) Using a cross-sectional research design. The sample in this study consisted of children aged 3-72 months in the city of Surabaya, totaling 400 individuals. The sample was selected using the multistage cluster random sampling technique. The study's results showed that the KIA book can be used to assess the status of child development at home (12).

3. Criticize

Based on the review results of four articles, it appears that the MCH book can be used as an effective instrument to stimulate child development.

4. Synthesize

The results of the reviewed research, based on four articles, showed varying outcomes. Research conducted by Hasanah and Fitriani (2018) (9) and Umiyah et al. (2019) (10) showed that MCH books are effective for stimulating child development, while research conducted by Herlina (2018) (11) showed that there was no relationship between the use of MCH books and stimulation with infant development. Research conducted by Lutfiya et al. (2019) (12) showed that MCH books are effective and reliable for stimulating child development.

5. Summarize

Based on the seven articles reviewed, three articles demonstrated that the MCH book can be used as a tool to stimulate child development. In contrast, one article found no relationship between the use of the MCH book and stimulation of infant development.

Table 1. The result of the article review

No	Reseracher	Tittle	Year's	Research Design	Population and sample	Sampling Techniques	Result
1	Nur Hasanah, Yunita Dyah Fitriani	Pendampingan Menggunakan Buku KIA Dengan Pertumbuhan Dan Perkembangan Anak Usia Bawah Dua Tahun (Baduta) Di Wilayah Kerja Puskesmas Sukomulyo – Gresik	2018	<i>Cross Sectional</i>	The population of this study consisted of all mothers with babies under 2 years old in the Sukomulyo-Gresik Health Center Working Area. The sample in the survey consisted of mothers who had babies under 2 years old, comprising a total of 48 mothers.	<i>Simple Random Sampling</i>	All respondents who received assistance in using the MCH book showed appropriate development, while those who did not receive assistance had more than 50% questionable development. The results of the relationship closeness test, using the Contingency Coefficient, indicated a significant association between aid in using the MCH book and child development (p-value = 0.000).
2	Astik Umiyah Irwanto Windhu Purnomo	Pengaruh Penyuluhan Kesehatan Tentang Pengisian Buku KIA Oleh Ibu Terhadap Stimulasi Dan Perkembangan Anak Usia 0-3 Tahun Di Puskesmas Tambak Pulau Bawean-Gresik	2019	quasi eksperimen; <i>pretest - post test group design</i>	Population: mothers who have children aged 0-3 years in the working area of Tambak Health Center in Tambak Village. Totaling 124 people. The sample in this study consisted of mothers with children aged 0-3 years who met the inclusion criteria. The sample size for both the control and treatment groups was 30 mothers each.	<i>Probability sampling.</i>	Statistical test results showed that stimulation carried out by mothers for 3 months showed no difference between the treatment and control groups with a significance value ($p > 0.05$). Although it did not show significance, the trend decreased from the 1st, 2nd, and 3rd months. This proves that providing health education to mothers has an effect on the stimulation given each month. Based on statistical tests, it shows that there is a significant difference in the development of toddlers aged 0-3 years in the treatment group with a value of $p = 0.002$ ($p < 0.05$), while in the control group there is no significant difference with a value of $p = 0.180$ ($p > 0.05$). This shows that the provision of intervention has an effect on the development of children aged 0-3 years as assessed by KPSP. Other results also indicate that there is no significant difference in child development between the

							treatment and control groups during the pre-test, with a p-value of 0.119 ($p > 0.05$). However, during the post-test, the results were in contrast to those of the pre-test, specifically, showing a significant difference between the treatment and control groups in terms of child development, with a p-value of 0.013 ($p < 0.05$).
3	Tutiek Herlina	Evaluasi Penerapan Stimulasi Perkembangan Bayi Pada Buku Kesehatan Ibu Anak Dan Pencapaian Perkembangan Bayi	2018	<i>cross-sectional</i>	The population consisted of all mothers with babies aged 3-12 months in Cepoko village, Panekan, Magetan District.	<i>Total sampling.</i>	The study's results showed that babies in Cepoko Village received more stimulation. Babies who received stimulation and those who did not both exhibited development that was appropriate for their age. The results of the statistical test showed that there was no relationship between stimulation and baby development, with a p-value = 1,000 ($p > 0.05$).
4	Indah Lutfiya, Irwanto, Windhu Purnomo,	<i>Identification Validity Early Detection of Child Development Using Indonesian Mch Handbook.</i>	2019	<i>Cross sectional</i>	The population was children aged 3-72 months in Surabaya City. The total sample was 400	<i>Multistage cluster random sampling</i>	The results of the study showed that there was no difference in examination results between the use of the MCH book and KPSP (p-value = 1.000). This indicates that the MCH Book can be used to assess the status of child development at home. The use of the MCH book is declared valid in measuring the status of child development. To see how consistent the MCH Book assessment is, a Kappa coefficient test was conducted, where the results showed reliability between the use of the MCH book and KPSP, with a p value = 0.000. The level of agreement on the examination results between the two measurement instruments was high (81.9%).

Discussion

1. Utilization of MCH books as an instrument in stimulating child development

The results of the literature review show that the MCH book is one of the instruments that can be used to stimulate child development. The results of the validity test indicate that the MCH book is a valid tool for stimulating early detection of child development. The results of the reliability test also show that the MCH book is very consistently used for stimulating early detection of child development. This is because the questions in the MCH book cover the four aspects outlined in the SDIDTK guide (12).

The use of the MCH Book is one of the strategies for empowering communities, especially families, to maintain their health and access quality maternal and child health services. The MCH Book provides comprehensive information on maternal and child health, including immunization, meeting nutritional needs, stimulating growth and development, as well as promotive and preventive efforts, such as early detection of maternal and child health problems (7).

Development refers to the increase in the structure and function of the body, characterized by the enhancement of gross motor skills, fine motor skills, speech and language, as well as socialization and independence. Early detection of child development disorders is beneficial for early diagnosis and can aid in recovery. This detection can be achieved by periodically checking development and providing stimulation. Stimulation is an activity designed to enhance the fundamental abilities of children aged 0-6 years, enabling them to grow and develop optimally. Stimulation of child growth and development can be achieved by mothers and fathers, who are the closest people to the child, substitute mothers or caregivers, other family members, and community groups within their respective household environments and in everyday life. A lack of stimulation can lead to deviations in child growth and development, as well as permanent disorders (1). The MCH book is the primary and first IEC media used to improve mothers' understanding. It not only contains information about maternal and child health, but also serves as a tool for monitoring child growth and development (7).

2. The influence of the use of MCH books in providing stimulation for child development

According to the review results, two articles indicated that the use of MCH books had an impact on mothers' ability to stimulate their child's development. One article found no relationship between stimulation using MCH books and child development. The study's results revealed a significant relationship between the use of MCH books and child development ($p = 0.000$). Children who received reasonable assistance with MCH books had growth and development that was appropriate for their age compared to children who did not receive help with MCH books. This is because the growth and development of children can be monitored optimally with assistance using MCH books, which contain comprehensive information about nutrition and how to stimulate children appropriately according to their age (9).

The results of a study conducted on children aged 0-3 years at the Tambak Pulau Bawean Health Center in Gresik Regency showed that there was no difference in stimulation between the treatment and control groups. Still, a decreasing trend occurred each month, as evidenced by the first month ($p = 0.937$), the second month ($p = 0.289$), and the third month ($p = 0.213$). Providing health education to mothers on completing the MCH book can enhance their ability to stimulate the development of children aged 0-3 years. Through the MCH Book, mothers can provide stimulation at every stage of child development (10). Child development changes after mothers receive health education on monitoring development through the MCH Book. Mothers' knowledge about child development stimulation is not the only factor that can influence mothers in the development process in children aged 0-3 years. Other factors that can influence a child's development include parenting factors, child nutrition, food security within the family and environment, and stimulation. In addition, the average mother has ≥ 2 children, which means she is experienced in raising children and understands the importance of stimulating her child's development. The results of other studies also indicate that there is no relationship between the application of infant development stimulation in the mother and child health book and infant development, with a p-value of 1,000 ($p > 0.05$) (11).

This is because the sample tends to be grouped or larger in infants with appropriate developmental status. However, most infants

who received stimulation exhibited age-appropriate development. Stimulation is one of the external factors that affect development. Optimal development requires stimulation, especially within the family, such as the provision of toys, child socialization, and the involvement of mothers and other family members in children's activities (11). Child development guidance can be done through stimulating activities, detection, and early intervention of deviations in toddler development. Instruments that can be used for screening and monitoring child development include the MCH Book and the DDTK method (Early Detection of Growth and Development), which utilizes the Pre-Screening Questionnaire for Development (KPSP) instrument (9).

The researcher assumes, based on the literature review, that the MCH book can be used as one of the instruments to stimulate toddler development. The MCH book not only contains information about child development stimulation, but also a lot of other information related to maternal and child health. Additionally, the MCH book is very easy for mothers and fathers to understand in terms of stimulating child development, as it is accompanied by informative and engaging pictures.

Conclusion

The MCH book is one of the tools that mothers can use to stimulate child development, allowing them to detect early signs of stunted child development and treat it promptly to overcome growth and development issues. The MCH book contains not only information about child development stimulation, but also a lot of other information related to maternal and child health. In addition, the MCH book is very easy to understand for mothers and husbands in stimulating child development, because pictures accompany all information and is interesting to read.

Ethical Approval

This research does not require ethics approval because it does not involve human or animal subjects, there is no intervention on individuals, and no personal data is collected.

Conflict Of Interest

The research team declares that there is no conflict of interest in this research.

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