

# The Effectiveness of Mother Class to Improve Utilization of Maternal and Child Health Handbook

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**Abstract—** Maternal and Child Health Handbook (MCHHB) is a source of information for mothers and families in monitoring mothers and children's health; besides that, the MCHHB is also a home-based record that can describe the process of child growth and development. However, the utilization of MCHHB in Indonesia has not been optimally used by mothers of toddlers; the low literacy of MCHHB evidences this. The study's purpose was to analyze the participation factors in the class of pregnant women and classes of children under five with the utilization of the MCHHB by mothers. This type of research is an analytical survey with a cross-sectional time approach. The study population is mothers who have children under the age of two years (0-23 months); the cluster sampling technique is 119 respondents. Data analysis included univariate analysis, bivariate analysis with chi-square. The results of the study there is a relationship between the participation of the mother class ( $p$  value = 0.010) with the utilization of the MCHHB while the participation of the antenatal class was not significantly related to the utilization of the MCHHB ( $p$  value = 0.147).

**Keywords—** MCHHB, Utilization, Child Health, mother class

## I. INTRODUCTION

The Japan International Cooperation Agency (JICA) compiled the Maternal and Child Health Handbook (MCHHB) in 1947, and was proven effective in reducing infant mortality (IMR) because it can detect high-risk pregnancies from the start [1]. This success became the basis for introducing the MCHHB in developing countries such as Sudan, the Philippines, and Indonesia [2]. The MCHHB was introduced in Indonesia in 1993 to maintain the quality of maternal and child health so that it can reduce the MMR and IMR [3].

The information contained in the MCHHB covers maternal health (pregnancy, childbirth and childbirth) and child health (monitoring growth and development, immunization and child health records) as well as various information on how to care for and care for the health of mothers and children [4]. The MCHHB was given from the first time a mother visits Antenatal, which is used as a medical record describing a mother's health condition from pregnancy to a 6-year-old child and is a comprehensive documentation tool that can [1] describe Continuum of Care [5]. Reduction in morbidity and mortality in children under five can be realized by families' contributions, especially mothers/ caregivers of children by applying adequate

nutrition intake, monitoring growth and development regularly, and correct care for sick children [6].

The government is trying to improve the utilization of MCHHB by optimizing the implementation of maternal classes in the Public Health Center Area. The class of mothers consists of antenatal class and classes of toddlers (mother class). The purpose of Antenatal class and Mother Class Activities is to discuss and exchange experiences with pregnant women and toddlers systematically and continuously facilitated by midwives, other health workers and cadres. Pregnant mothers and toddler mother classes are essential activities in the effort to utilize the MCHHB in the community as an effort to learn mothers, husbands and families through joint learning activities to prepare pregnant women in facing safe and safe childbirth, and preparation of mothers and toddlers in child health care according to standard [7].

Data from Yogyakarta City Health Office coverage of MCHHB ownership reaches 100%, but there is no data related to the utilization of MCHHB [8]. In mothers of toddlers, the utilization of MCHHB is more dominantly used for the measurement of height and weight measurements when attending posyandu and notes on immunization administration. The survey conducted on 10 mothers of toddlers almost all said that they only read the immunization schedule, while the mothers who took part in class activities said that they read the MCHHB more often, and had implemented several messages contained in the MCHHB. This is the basis for researchers to analyze relationship of participation in the mother class and antenatal class with the utilization of the MCHHB.

## II. METHOD

This type of research is an analytic survey with a research design using a cross-sectional time approach. The study's independent variable is the class of pregnant women and classes of children under five, while the dependent variable is the utilization of the MCHHB. The sample in this study were mothers who have children under the age of 2 years (Age 0-23 months) in the Tegalrejo Public Health Center (PHC) working area. Method of Sampling by Cluster random sampling of 119 mothers. Data collection was carried out in 14 posyandu in 4 villages in Tegalrejo District. The research instrument was a questionnaire with closed questions that had been tested for validity and reliability. Content validity test was done by expert judgment and construct validity was

done by item test using the Product Moment correlation formula. Analysis of bivariate data using chi square. Research ethics includes requesting the approval of respondents and has obtained a research permit from the Ethics Committee of 'University Aisyiyah Yogyakarta.

**III. RESULT**

**TABLE I. INDICATORS FOR THE UTILIZATION OF MCHHB**

<b>The Utilization of MCHHB by mothers</b>	<b>%</b>
Brought when visiting health facilities	88,2
Brought when visiting Posyandu	90,7
<b>Read</b>	
Newborn care	47,5
immunization	84,9
Breastfeed	54,6
Child Development	52,1
growth and development monitoring	49,6
Current Feeding	48,7
Signs of child health	44,5
Nutritional Need	42,8
Daily care of a child	39,5
Care sick child	38,7
Signs of child sick	44,5
Comprehension of information	68
<b>Practices the information</b>	
Monitor & stimulate of child development	59,2
Feeding	22,7
Signs of child sick guidelines	34
Immunization	82
<b>The Utilization of MCHHB by health workers/ health volunteer</b>	<b>%</b>
Fill of Pregnant Women's Health Records	90
Fill of medical record childbirth. Pospartum and newborn	65
Fill Childbirth record	
Fill Newborn Care record	100
Fill Immunization Record	65
Fill Vitamin A Record	100
Fill Feeding Counseling Record	100
Fill Growth chart (Weight/Height, Height/Age, head circumference)	35
	10
Fill Kartu Menuju Sehat/ KMS (Weight /Age)	
Fill Disease and Growth Problems Reord	100
	10

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**TABLE II. TABLE TYPE STYLES**

<b>Variables</b>	<b>Utilization of MCHHB</b>					<b>P value</b>
	<b>High</b>		<b>Low</b>		<b>N</b>	
	<b>N</b>	<b>%</b>	<b>n</b>	<b>%</b>		
<b>Antenatal Class</b>						
Join	11	39,3	17	60,7	28	0,147
Not Join	50	54,9	41	45,1	91	
Total	61	51,3	58	48,7	119	
<b>Mother Class</b>						
Join	12	80	3	20	15	0,010*
Not Join	58	55,8	46	44,2	104	
Total	61	51,3	58	48,7	119	

Chi-square analysis was significant

**IV. DISCUSSION**

Based on the bivariate analysis in table 2, it was found that there was no relationship between maternal participation in the class of pregnant women and the utilization of the MCHHB. There is no difference in the level of utilization of the MCHHB for mothers who used to take classes in pregnant women and women who did not take classes in pregnant women. In the Class of Pregnant Mothers, the MCHHB is used to improve mothers' knowledge and skills regarding pregnancy, childbirth, and newborn care, and monitoring tools for maternal health [[7]. WHO reports that antenatal class program has been shown to effectively reduce the incidence of cesarean delivery and reduce the utilization of epidural anesthesia during labor [9].

Pregnant women who join antenatal classes get more information related to childbirth to better prepare for childbirth. The MCHHB was used as the leading learning media in antenatal class, but the participation of the pregnant mother class cannot determine the level of utilization of the MCHHB by the mother. Nowadays, many pregnant women feel lazy to read MCHHB because they feel less practical and prefer to read sources from the internet.

The internet is one of the media with fast development and is an alternative for pregnant women to look for sources of health literacy [10], with a smartphone pregnant women can access the internet through handgrips and obtain information quickly, this is one of the reasons for the high use internet in health literacy. However, many pregnant women who have not been able to choose a valid source of health literacy have even pregnant women who read health articles from personal blogs and websites of people who are not experts in the health sector.

Based on table 1, 88.2% of mothers always carry an MCHHB when visiting health facilities, especially when carrying out antenatal care checks/ pregnancy visits. Completeness of filling the health record of pregnant women by health workers is very high at 90%. This is inversely proportional to sick children's health records and growth and development problems in children who are only complete 10% of respondents. This happens because of the low understanding of health workers about the benefits of the MCHHB. The MCHHB is useful for parents, families, cadres and health workers in monitoring maternal and child health [11].

Bivariate analysis showed a significant relationship between maternal participation in the toddler mother class and the utilization of the MCHHB. Mothers who take part in toddler mother class activities have a higher MCHHB utilization level compared to mothers who do not attend toddler mother classes. This study in line with previous study which states that there are differences between the groups who join mother class with the groups did not join mother class. Mothers who join mother class have high knowledge about the MCHHB. Increased knowledge is expected to provide care and apply appropriate parenting to the toddlers owned [12].

The study results of 15 respondents who attended the mother's class, there were 15 (80%) mothers who had a good level of MCHHB utilization. Utilization of the MCHHB for mothers of children under five can be assessed in mothers'

efforts to bring MCHHB when they come to Posyandu, read MCHHB, and apply messages in MCHHB [11][11] with the most information applied by mothers is compliance in giving immunizations to children. Mothers who use the MCHHB were more organized in giving immunizations to children because the immunization schedule was listed in the MCHHB[13].

Other benefits of MNH mothers' participation can exchange ideas or discuss issues related to parenting, child growth, and development with other toddler mothers. Mother class can increase knowledge, attitudes, and behavior of mothers to realize the optimal growth and development of infants [14]. Mothers who join mother class were expected to read more MCHHB so that they have the concept of providing proper nutrition and a positive attitude was formed to apply this information [6] to reduce the likelihood of nutritional problems in children. Based on table 1, only a small proportion of mothers (22.7%) applied feeding methods to children. Other studies report that the utilization of the MCHHB significantly influences feeding practices, including exclusive breastfeeding and complementary feeding[5][5].

#### V. CONCLUSION

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