

Utilization of Maternal and Child Health Books among Pregnant Women: Which Factors Have the Greatest Influence?

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ABSTRACT: The Maternal and Child Health (MCH) book is an important medium for improving pregnant women's knowledge and awareness of maternal and fetal health. However, several health centers still report low MCH book ownership among pregnant women, including Kuala Lempuing Health Center (52.55%) and Anggut Atas Health Center (77.92%). This study aimed to identify factors influencing the utilization of MCH books among pregnant women and to determine the most dominant factor. This descriptive analytic study used a cross-sectional design. It was conducted from June 8 to June 18, 2025, in the working areas of Kuala Lempuing and Anggut Atas Health Centers, Bengkulu City. The study involved all 70 eligible pregnant women in their second and third trimesters through total sampling. Primary data were collected using structured questionnaires, and secondary data were obtained from relevant records. The results showed significant associations between MCH book utilization and knowledge ($p < 0.001$), attitude ($p < 0.001$), and family support ($p < 0.001$). Multivariate analysis showed that family support was the most dominant factor ($p = 0.001$; OR = 10.800). These findings highlight the importance of family involvement and the role of health care providers in delivering health education and social support to optimize MCH book utilization.

KEYWORDS: Attitude, Family support, Knowledge, MCH book, Pregnant women.

INTRODUCTION

The success of a country in improving maternal health is commonly measured by the Maternal Mortality Rate (MMR), which refers to deaths that occur during pregnancy or within 42 days after the end of pregnancy. In 2023, the reported number of maternal deaths in Indonesia was 4,129, an increase from 4,005 cases in the previous year. The MMR in Indonesia remains 305 per 100,000 live births, indicating that reducing maternal mortality continues to be a major challenge in maternal and child health development (Kemenkes RI, 2023).

The high MMR in Indonesia prompted the Minister of Health of the Republic of Indonesia to issue Regulation No. 284/MENKES/SK/III/2004 concerning Maternal and Child Health Books (MCH books). One government policy aimed at reducing the MMR is the promotion and utilization of MCH books. However, many pregnant women still do not use the MCH book optimally. Some read it infrequently and consider it merely a record of pregnancy examinations (Sarhini & Galaupa, 2024).

The MCH book is an important resource for pregnant women because it improves knowledge and helps prevent adverse outcomes, including maternal death. Every pregnant woman should have an MCH book because it provides easy access to information on maternal and child health, warning signs during pregnancy, and available health services. The MCH book also functions as a screening medium; a tool for communication, information, and education (CIE); a record of growth and development; an early risk identification tool; an educational resource; and a means of monitoring maternal and child health through comprehensive MCH services, nutrition, immunization, and child growth and development programs (Dasni, Pabidang, & Prabandari, 2024).

The utilization of the MCH book can be influenced by various factors. Lawrence Green (1991), as cited in Darmawan (2016), proposed that health behavior is influenced by predisposing, enabling, and reinforcing factors. Predisposing factors include knowledge, attitudes, and individual characteristics such as age, parity, education, occupation, and family income. Enabling factors include the availability of facilities and resources, while reinforcing factors include the behavior of health care providers and family support (Pakpahan et al., 2021). This study aimed to identify factors associated with the utilization of the MCH book among pregnant women in their second and third trimesters and to determine the most dominant factor.



METHODS

This study was descriptive analytic with a cross-sectional design. It was conducted in the working areas of Kuala Lempuing and Anggut Atas Health Centers in Bengkulu City in June 2025. The study population consisted of 70 pregnant women in their second and third trimesters. A total sampling technique was used, so all 70 eligible pregnant women were included. Data were collected from primary and secondary sources. Primary data were obtained using four structured questionnaires: a knowledge questionnaire consisting of 10 multiple-choice questions, an attitude questionnaire consisting of 10 Likert-scale items, a family support questionnaire consisting of 5 yes/no questions, and an MCH book utilization questionnaire consisting of 10 yes/no questions. This study was approved by the Research Ethics Committee of Poltekkes Kemenkes Bengkulu under approval number KEPK.BKL/490/06/2025.

RESULTS

Table 1. Frequency distribution of knowledge, attitude, family support, and MCH book utilization

Variable	Frequency (n = 70)	Percentage (%)
Knowledge		
Good knowledge	42	60.0
Limited knowledge	28	40.0
Attitude		
Positive	47	67.1
Negative	23	32.9
Family support		
Strong support	43	61.4
Insufficient support	27	38.6
Utilization		
Effective	48	68.6
Limited	22	31.4
Total	70	100.0

Table 1 presents the frequency distribution of knowledge, attitude, family support, and MCH book utilization among pregnant women. Most respondents had good knowledge, totaling 42 women (60.0%), while 28 women (40.0%) had limited knowledge. Regarding attitude, more than half of the respondents had a positive attitude, represented by 47 women (67.1%), whereas 23 women (32.9%) had a negative attitude. In terms of family support, 43 women (61.4%) received strong support from their families, while 27 women (38.6%) reported insufficient family support. For utilization, 48 women (68.6%) used the MCH book effectively, whereas 22 women (31.4%) showed limited utilization.

Table 2. Relationship between knowledge, attitude, family support, and MCH book utilization

Variables	Effective		Limited		Total		p-value
	n	%	n	%	n	%	
Knowledge							
Good knowledge	38	54.3	4	5.7	42	60.0	<0.001
Limited knowledge	10	14.3	18	25.7	28	40.0	
Attitude							
Positive	40	57.1	7	10.0	47	67.1	<0.001
Negative	8	11.4	15	21.4	23	32.9	
Family support							
Strong support	39	55.7	4	5.7	43	61.4	<0.001
Insufficient support	9	12.9	18	25.7	27	38.6	

The bivariate analysis showed that knowledge, attitude, and family support were significantly associated with MCH book utilization. Pregnant women’s knowledge had a significant relationship with MCH book utilization ($p < 0.001$). Pregnant women’s attitudes were also significantly associated with MCH book utilization ($p < 0.001$). In addition, family support showed a significant relationship with MCH book utilization ($p < 0.001$).

Table 3. The most dominant factor associated with MCH book utilization

Step	Variable	B	S.E.	Wald	df	p-value	OR (Exp(B))
Step 1 ^a	Knowledge	1.173	0.811	4.779	1	0.029	5.890
	Attitude	0.972	0.795	1.495	1	0.221	2.643
	Family support	2.265	0.740	9.376	1	0.002	9.634
	Constant	-8.262	1.772	21.733	1	<0.001	0.000
Step 2 ^a	Knowledge	2.210	0.731	9.155	1	0.002	9.120
	Family support	2.380	0.727	10.710	1	0.001	10.800
	Constant	-7.717	1.643	22.062	1	<0.001	0.000

The multivariate analysis showed that family support was the most dominant factor associated with MCH book utilization, with a p-value of 0.001 and an odds ratio (OR) of 10.800. This means that pregnant women who received family support were 10.8 times more likely to utilize the MCH book effectively than those who received insufficient family support.

DISCUSSION

Relationship between knowledge and MCH book utilization among pregnant women

The analysis showed that of 42 pregnant women with good knowledge, 38 women (54.3%) effectively utilized the MCH book. In contrast, among 28 pregnant women with limited knowledge, only 10 women (14.3%) used the MCH book effectively. This finding indicates that MCH book utilization is not determined by knowledge alone; it may also be influenced by habits, guidance from health care providers, and family support. Some pregnant women may use the MCH book because midwives or physicians recommend bringing it to antenatal care visits, even when they do not fully understand the book’s content and functions.

Most pregnant women who effectively utilized the MCH book had good knowledge. The chi-square test showed a significant association between pregnant women’s knowledge and MCH book utilization ($p < 0.001$). According to Lawrence Green’s PRECEDE-PROCEED Model, knowledge is a predisposing factor that can influence health behavior. Therefore, adequate knowledge can encourage pregnant women to be more aware, motivated, and actively involved in using the MCH book optimally.

The findings of this study are consistent with research by Susanti and Suryani (2024) on factors influencing MCH book utilization among pregnant women, which demonstrated a correlation between knowledge level and MCH book utilization. A good understanding of the content and purpose of the MCH book encourages mothers to use it more actively as a source of information and guidance throughout pregnancy.

These findings are also supported by Halida et al. (2023), who reported a significant relationship between pregnant women’s knowledge of the MCH book and its utilization. The greater the mothers’ knowledge about the importance of the MCH book, the more likely they are to use it optimally to monitor their own health and the health of their fetuses. Thus, this study emphasizes that knowledge is an important determinant in improving MCH book utilization among pregnant women.

Relationship between attitude and MCH book utilization among pregnant women

The analysis showed that of 47 pregnant women with a positive attitude, 40 women (57.1%) effectively utilized the MCH book. In contrast, among 23 pregnant women with a negative attitude, 8 women (11.4%) still used the MCH book effectively. This may occur because a negative attitude does not necessarily become an absolute barrier to health behavior. In some cases, pregnant women use the MCH book due to external influences, such as the requirement to bring it during antenatal examinations,



guidance from health care providers, or health center service procedures. Therefore, utilization may occur as a form of compliance even when mothers do not fully have a positive perception of the benefits of the MCH book.

These results indicate that most pregnant women who utilized the MCH book effectively had a positive attitude. The chi-square test showed a significant association between pregnant women's attitudes and MCH book utilization ($p < 0.001$). According to Lawrence Green's PRECEDE-PROCEED Model, attitude is a predisposing factor that influences health behavior. Attitude reflects an individual's readiness to act based on beliefs and perceptions regarding a particular behavior. In this context, a positive attitude toward the MCH book encourages pregnant women to use it more actively, whereas a negative attitude may become a barrier even when information and resources are available.

The findings of this study are in line with Ambarita et al. (2022), who found that most pregnant women had a positive attitude toward MCH book utilization and that attitude was significantly related to the level of utilization. A positive attitude reflects mothers' awareness and acceptance of the importance of the MCH book in monitoring pregnancy health. This finding confirms that fostering a positive attitude is a strategic step in improving MCH book utilization. However, attitude is not the only influencing factor; comprehensive interventions are needed that also consider family support, knowledge, and the role of health care professionals.

The findings are also consistent with Silviani and Fitriani (2024), who reported a significant relationship between attitude and MCH book utilization among pregnant women. This suggests that the more positive the attitude of pregnant women, the greater their tendency to use the MCH book optimally.

Relationship between family support and MCH book utilization among pregnant women

The analysis showed that of 43 pregnant women who received strong family support, 39 women (55.7%) effectively utilized the MCH book. In contrast, among 27 pregnant women who received insufficient family support, 9 women (12.9%) still used the MCH book effectively. Although this group lacked adequate family support, some women continued to use the MCH book because of personal motivation, awareness of the importance of maintaining a healthy pregnancy, or encouragement from health care professionals. Previous experience and information from their environment may also have empowered these women to use the MCH book independently.

These results indicate that most pregnant women who utilized the MCH book effectively received support from their families. The chi-square test showed a significant association between family support and MCH book utilization among pregnant women ($p < 0.001$).

According to Lawrence Green's PRECEDE-PROCEED Model, family support is categorized as a reinforcing factor that plays an important role in influencing health behavior. Reinforcing factors include feedback or support from the social environment, including family members, friends, and health care professionals, which can strengthen or weaken an individual's tendency to perform specific behaviors. In this context, family support acts as an external motivator that can increase pregnant women's motivation to use the MCH book. When mothers feel supported, cared for, and encouraged by their families, they are more likely to use the MCH book actively and consistently as part of their efforts to maintain health during pregnancy.

The findings of this study are consistent with Dewi et al. (2023), who stated that family support is related to MCH book utilization among pregnant women, although the level of support is not yet optimal. Families have not fully contributed to supporting and completing MCH book entries, such as reminding mothers, reviewing the book's content, or understanding the information provided in the book.

These findings also align with Shalihah and Indriastuti (2025), who showed that family support influences MCH book utilization. Family support, particularly from husbands, is one of the most important factors shaping pregnant women's behavior toward the use of the MCH book. Husbands who are actively involved can encourage mothers to read, bring, and regularly complete the MCH book. The presence and attention of a husband provide emotional motivation and foster a stronger sense of responsibility among mothers to maintain their health during pregnancy through MCH book utilization.

The most dominant factor associated with MCH book utilization

Based on the logistic regression analysis, family support emerged as the most dominant factor associated with MCH book utilization among pregnant women. After knowledge, attitude, and family support were analyzed simultaneously, family support showed the strongest effect on effective MCH book utilization.



Pregnant women who received family support were 10.8 times more likely to utilize the MCH book effectively than those with insufficient family support (OR = 10.800; p = 0.001). Knowledge also remained significant in the final model (OR = 9.120; p = 0.002), whereas attitude did not remain significant after adjustment and was excluded from the final model. These findings indicate that family support has a particularly important role in encouraging consistent MCH book utilization among pregnant women.

CONCLUSION

This study concluded that knowledge, attitude, and family support were significantly associated with MCH book utilization among pregnant women. Among these factors, family support was identified as the most dominant factor influencing effective MCH book utilization. Therefore, health care providers should strengthen health education and involve family members, especially husbands, in antenatal care counseling to encourage optimal use of the MCH book.

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