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# CORRELATION BETWEEN MCH BOOK UTILIZATION AND PREGNANT WOMEN'S KNOWLEDGE OF PREGNANCY DANGER SIGNS AT TELAGA DEWA HEALTH CENTER

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## ABSTRACT

Pregnancy is a critical phase in a woman's life cycle and may be accompanied by complications that threaten maternal and fetal health. The Maternal and Child Health (MCH) Handbook, known in Indonesia as Buku KIA, functions as both a documentation tool and an educational medium for pregnant women. However, its utilization remains suboptimal, and many mothers still lack adequate knowledge of pregnancy danger signs. This study aimed to examine the relationship between the use of the MCH Handbook and pregnant women's knowledge of danger signs during pregnancy in the Telaga Dewa Health Center area, Bengkulu City, in 2025. A quantitative analytical survey with a cross-sectional design was conducted among 73 pregnant women selected through total sampling. Data were collected using structured questionnaires and analyzed using univariate and bivariate analysis, with a Chi-square test applied at a 95% confidence level. Results showed that 58.9% of respondents used the MCH Handbook, while 41.1% did not. Additionally, 52.1% of respondents demonstrated poor knowledge of pregnancy danger signs. Bivariate analysis confirmed a significant association between MCH Handbook utilization and maternal knowledge ($p = 0.000$). In conclusion, the MCH Handbook significantly contributes to improving maternal knowledge regarding pregnancy danger signs. Strengthening mothers' engagement with the handbook and ensuring continuous support from health workers are recommended to optimize its effectiveness.

**Keywords:** MCH Handbook, knowledge, danger signs, pregnancy, pregnant women.

## INTRODUCTION

Pregnancy represents a vulnerable stage in a woman's life, carrying the potential for various complications that can endanger both maternal and fetal well-being. The global health agency (WHO, 2023) estimates that roughly 15% of pregnancies are at risk, and nearly three-quarters of maternal deaths occur as a result of complications during pregnancy, childbirth, or the postpartum period. This highlights the necessity for preventive strategies, timely detection, and proper management. To address these challenges, the Indonesian government implemented the Maternal and Child Health (MCH) Handbook, known locally as the MCH book. This handbook functions as both an educational tool and a health record, covering services for pregnant women, deliveries, postpartum care, newborns, and toddlers (Kebumen District Health Office, 2020).

Despite widespread distribution, the utilization of the handbook remains inconsistent. According to the 2023 Indonesian Health Survey (SKI), 71.7% of pregnant women owned the handbook, but many did not use it effectively. In Bengkulu Province, ownership was lower (62.4%), and knowledge of pregnancy danger signs was limited, with only 39.5% recognizing reduced fetal movement and 43.6% identifying high fever as dangerous. Prior studies (Zaitun & Salamah, 2024; Yulastini, 2023) have demonstrates a considerable link between handbook utilization and maternal knowledge. However, exists is limited research specific to Bengkulu City.

The Telaga Dewa Health Center reported 556 pregnant women (8.09% of the city total), with 20% considered high-risk (Bengkulu City Health Office, 2023). A preliminary survey (March 2025) revealed that

although all women possessed the handbook, 70% did not understand its content regarding danger signs. Therefore, this study seeks to evaluate the association between MCH Handbook utilization and maternal knowledge of pregnancy danger signs in Bengkulu City. Based on this description, this study intends to examine the correlation between MCH Handbook utilization and as well as those of expectant maternal recognition of danger signs during pregnancy within the jurisdiction of the Telaga Dewa Community Health Center in Bengkulu City in 2025. The study is expected to provide a scientific contribution by strengthening empirical evidence on the effectiveness of the MCH Handbook and serve as a basis for strategies for enhancing the quality of maternal health education at the primary care level. The Telaga Dewa Health Center reported 556 pregnant women (8.09% of the city total), with 20% considered high-risk (Bengkulu City Health Office, 2023). A preliminary survey (March 2025) revealed that although all women possessed the handbook, 70% did not understand its content regarding danger signs. Therefore, this study seeks to evaluate the association between MCH Handbook utilization and maternal knowledge of pregnancy danger signs in Bengkulu City. Based on this description, this study intends to examine the correlation between MCH Handbook utilization and as well as those of expectant maternal recognition of danger signs during pregnancy within the jurisdiction of the Telaga Dewa Community Health Center in Bengkulu City in 2025. The study is expected to provide a scientific contribution by strengthening empirical evidence on the effectiveness of the MCH Handbook and serve as a basis for strategies for enhancing the quality of maternal health education at the primary care level.

## MATERIALS AND METHODS

This research employed quantitative analytical surveys utilizing a cross-sectional. Population comprised of 73 pregnant women registered at the Telaga Dewa Health Center between September 2024 and February 2025. The sampling technique used was total sampling, in which the entire population was included. Inclusion criteria: This study involved pregnant women across all trimesters of gestation (first, second, and third), possessing the MCH Handbook, and willing to participate. Exclusion criteria: women who could not be contacted after two attempts or were unwell.

The independent variable was MCH Handbook utilization, and the dependent variable was maternal knowledge of pregnancy danger signs. Data collection involved structured questionnaires and was supplemented by secondary data from health registers. The analysis comprised univariate techniques to determine frequency distributions and bivariate analysis employing the Chi-square test, conducted at a 95% confidence interval ($\alpha = 0.05$). Ethical clearance was duly secured from the Health Research Ethics Committee, Poltekkes Kemenkes Bengkulu (No. KEPK.BKL/492/05/2025).

## RESULTS AND DISCUSSION

### 1. Univariate Analysis

**Table 1** Frequency Distribution of Maternal and Child Health Handbook Utilization in the Telaga Dewa Community Health Center Service Area, Bengkulu City, 2025

| Pemanfaatan Buku KIA | Frekuensi (f) | Presentase (%) |
|---|---|---|
| Tidak | 30 | 41,1% |
| Ya | 43 | 58,9% |
| Total (n) | 73 | 100% |

Table 1 indicates that out of 73 respondents, the majority (58.9%) reported utilizing the MCH Handbook, while 41.1% stated they had not used it.

**Table 2** Frequency Distribution of Knowledge Regarding Danger Signs During Pregnancy in the Service Area of the Telaga Dewa Community Health Center, Bengkulu City, 2025

| **Pengetahuan** | **Frekuensi (f)** | **Presentasi (%)** |
|---|---|---|
| Kurang | 38 | 52,1% |
| Cukup | 13 | 17,8% |
| Baik | 22 | 30,1% |
| **Total (n)** | 73 | 100% |

Table 2 illustrates that among the 73 pregnant women surveyed, 52.1% demonstrated poor knowledge of pregnancy danger signs, 17.8% showed moderate knowledge, and only 30.1% had a good level of understanding.

## 2. Bivariate Analysis

**Table 3** The Association Between Utilization of MCH Books and Knowledge of Danger Signs of Pregnancy

| Pemanfaatan Buku KIA | Pengetahuan Tanda Bahaya Kehamilan | | | | | | Total | | *P Value* |
|---|---|---|---|---|---|---|---|---|---|
| | Kurang | | Cukup | | Baik | | | | |
| | F | % | F | % | F | % | F | % | |
| Tidak | 26 | 86,7% | 3 | 10,0% | 1 | 3,3% | 30 | 41,1% | **0,000** |
| Ya | 12 | 27,9% | 10 | 23,3% | 21 | 48,8% | 43 | 58,9% | |

Table 3, it shows that of the 30 pregnant women (86.7%) who did not utilize the MCH book, they had poor knowledge and 43 pregnant women who utilized the MCH book had good knowledge. The findings based on the bivariate analysis conducted with the *Chi-Square* statistical test revealed a significant an association between the utilization of the MCH book and pregnant women's knowledge of pregnancy danger signs was observed, with a P-value of 0.000, which is less than the significance threshold of 0.05.

## DISCUSSION

1. Univariate Analysis

The results of the study indicated that most pregnant women (58.9%) had used the MCH Handbook, although 41.1% had not. This situation indicates that the MCH Handbook is not being utilized optimally. This is suspected to be related to mothers' low understanding of the MCH Handbook's contents, limited health literacy, and the perception that the MCH Handbook only serves as administrative documentation when visiting health facilities. This finding aligns with the guidelines of the Indonesian Ministry of Health (2015), which emphasize that the MCH Handbook will be beneficial if mothers not only have it but also read, understand, and apply the information contained therein with guidance from health workers.

Research by Amalia et al. (2023) supports these results by showing that mothers who regularly read the MCH Handbook have a better understanding of pregnancy danger signs. Research by Hifzil Izzati et al. (2023) and Yuli Yani et al. (2024) also confirms that health literacy, motivation, and support from health workers play a crucial role in increasing the utilization of the MCH Handbook. Overall, the results of this study confirm that the utilization of the MCH Handbook is strongly influenced by both internal factors (knowledge, literacy, motivation) and external factors (support from health workers).

Therefore, interventions such as increased health education, support from health workers, and strategies to improve maternal health literacy are needed so that the MCH Handbook truly functions as the primary medium for increasing mothers' knowledge about pregnancy danger signs. The study results showed that more than half of pregnant women (52.1%) had insufficient knowledge regarding pregnancy danger signs. This condition may be caused by insufficient use of the MCH Handbook, limited counseling from health workers, and educational background and pregnancy experience. Mothers who do not actively read or record in the MCH Handbook tend to have low knowledge due to minimal exposure to important information related to pregnancy health.

This discovery is consistent with the theory proposed by Notoatmodjo (2018), which states that knowledge is acquired through sensory activity and is influenced by experience and individual perspectives. Previous research also supports this finding, such as Utami et al. (2023) who demonstrated that verbal education regarding the contents of the MCH Handbook improves maternal knowledge, and Jumirah (2020) who found that regular use of the MCH Handbook correlates with improved knowledge. Furthermore, Yulastini (2023) showed that low levels of education contribute to the limited knowledge of pregnant women. Therefore, it can be concluded that the low level of knowledge of pregnant women is influenced by internal factors (motivation, education, experience) and external factors (use of the MCH Handbook and the role of health workers). Therefore, more intensive support and education are needed so that pregnant women can optimally understand the danger signs of pregnancy.

2. Bivariate Analysis

The outcome of the chi-square analysis resulted in a p-value of 0.000 (<0.05), signifying a considerable connection between the use of the MCH Handbook and mothers' knowledge of pregnancy danger signs. This finding highlights that the handbook serves not only as a health record but also as an effective educational resource. Mothers who consistently read, comprehend, and apply its contents are more likely to demonstrate greater awareness and responsibility for their pregnancy. In addition, regular use of the handbook fosters stronger communication with health professionals and enhances support from family and the community.

These results are in line with the study by Handari & Retno (2021), which showed a notable improvement in maternal knowledge following counseling sessions utilizing the MCH Handbook. Similar outcomes were reported by Chadaryanti & Harahap (2023), who identified a positive relationship between handbook use and maternal awareness of pregnancy danger signs. Anisa et al. (2022) also emphasized that educational background and access to information a significant part in maternal knowledge, thereby influencing the effectiveness of the handbook.

Nevertheless, the present study revealed that 27.9% of mothers who used the handbook still had insufficient knowledge, suggesting that utilization alone is not enough. Factors such as education level, age, parity, attitudes, and occupation may also determine outcomes. Conversely, some mothers who did not use the handbook displayed adequate or good knowledge, likely obtained through alternative sources such as electronic media or prior experiences. Overall, the findings confirm that while the MCH Handbook contributes to improved maternal knowledge, its effectiveness is shaped by both internal and external factors. Strengthening health literacy, ensuring active support from health workers, and expanding outreach programs are essential strategies to maximize the role of the MCH Handbook as a key instrument in the area of maternal and child health education.

## CONCLUSION

The findings of this study indicate that more than half of pregnant women at the Telaga Dewa Health Center in Bengkulu City in 2025 utilized the Maternal and Child Health (MCH) Handbook. However, a proportion of these women still demonstrated inadequate knowledge regarding danger signs during pregnancy. A statistically significant association was identified between the utilization of the MCH Handbook and maternal knowledge of pregnancy danger signs.

These results suggest that active engagement with the MCH Handbook plays an important role in increasing pregnant women’s awareness of early warning signs during pregnancy. Strengthening health education strategies, reinforcing the role of midwives in guiding mothers in using the handbook, and integrating regular handbook-based counseling into antenatal care services are recommended to improve maternal knowledge and pregnancy outcomes.

From a scientific perspective, this study contributes additional evidence to the growing body of literature supporting the effectiveness of the MCH Handbook as a maternal health education tool at the primary health care level.

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