

THE INFLUENCE OF MIDWIFE AND FAMILY SUPPORT ON THE UTILIZATION OF THE MCH BOOK FOR PREGNANT WOMEN AT KALIANDA HEALTH CENTER, SOUTH LAMPUNG

Ika Fitria Elmeida¹, Nurlaila², Nurchairina³, Eva Berliana⁴

^{1,2,3,4} D3 Midwifery Program, Tanjungkarang Health Polytechnic, Ministry of Health, Tanjungkarang
Email Corresponding Author: ikafitriaelmeida@poltekkes-tjk.ac.id

ABSTRAK : PENGARUH DUKUNGAN BIDAN DAN KELUARGA TERHADAP PEMANFAATAN BUKU KESEHATAN IBU DAN ANAK UNTUK IBU HAMIL DI PUSAT KESEHATAN KALIANDA, LAMPUNG SELATAN

Pemanfaatan Buku Kesehatan Ibu dan Anak (KIA) merupakan strategi penting dalam menurunkan angka kematian ibu dan bayi. Namun, tingkat pemanfaatannya masih belum optimal. Penelitian ini bertujuan untuk menganalisis pengaruh dukungan bidan dan keluarga terhadap pemanfaatan Buku KIA pada ibu hamil. Penelitian menggunakan pendekatan kuantitatif dengan desain cross-sectional. Sampel terdiri dari ibu hamil di wilayah kerja Puskesmas Kalianda yang dipilih secara purposive sampling. Data dikumpulkan melalui kuesioner dan dianalisis menggunakan analisis univariat, bivariat (Chi-square), serta path analysis. Hasil menunjukkan bahwa dukungan bidan memiliki pengaruh signifikan terhadap pemanfaatan Buku KIA, dengan 68% responden mengalami peningkatan pemahaman setelah edukasi. Dukungan keluarga juga berpengaruh signifikan ($\beta=0,32$; $p=0,001$), terutama melalui peran suami dalam mengingatkan penggunaan Buku KIA. Model penelitian menjelaskan 42% variasi pemanfaatan Buku KIA. Disimpulkan bahwa dukungan bidan dan keluarga merupakan faktor penting dalam meningkatkan pemanfaatan Buku KIA. Intervensi berbasis keluarga dan penguatan edukasi oleh bidan direkomendasikan untuk meningkatkan kesehatan ibu dan anak.

Kata kunci: Buku KIA, dukungan bidan, keluarga, ibu hamil, maternal

ABSTRACT

The utilization of the Maternal and Child Health (MCH) Book is an important strategy in reducing maternal and infant mortality rates. However, the level of its use is still not optimal. This study aims to analyze the influence of midwife and family support on the utilization of the MCH Book among pregnant women. The study used a quantitative approach with a cross-sectional design. The sample consisted of pregnant women in the working area of Kalianda Health Center, selected through purposive sampling. Data were collected via questionnaires and analyzed using univariate, bivariate (Chi-square), and path analysis. The results showed that midwife support has a significant influence on the utilisation. The use of the KIA Handbook, with 68% of respondents experiencing increased understanding after education. Family support also had a significant influence ($\beta=0.32$; $p=0.001$), particularly through the husband's role in reminding them to use the KIA Handbook. The research model explained 42% of the variation in KIA Handbook utilization. It was concluded that midwife and family support are important factors in increasing KIA Handbook utilization. Family-based interventions and strengthening education by midwives are recommended to improve maternal and child health.

Keywords: KIA Handbook, midwife support, family, pregnant women, maternal

INTRODUCTION

Maternal mortality (MMR) and infant mortality (IMR) remain major health problems in Indonesia. One government strategy is to use the KIA Handbook as a medium for education, communication, and monitoring of maternal and child health. However, utilization of the KIA Handbook remains low, with approximately 30% of

pregnant women not having one or not using it optimally.

KIA Handbook utilization is influenced by various factors, including support from health workers and families. Midwives, as front-line health workers, play a crucial role in providing education during antenatal care (ANC) visits. Furthermore, families, especially husbands, play a role in supporting pregnant women's health behaviors.

Maternal and infant mortality remain major public health challenges worldwide, particularly in low- and middle-income countries, where access to quality maternal healthcare services is still limited [3]. Despite global efforts to improve maternal health outcomes, preventable complications during pregnancy and childbirth continue to contribute significantly to morbidity and mortality rates [13]. In Indonesia, reducing maternal mortality remains a national priority, and various strategies have been implemented to improve antenatal care coverage and maternal health literacy [13].

One of the key strategies introduced by the Indonesian government is the use of the Maternal and Child Health (MCH) handbook, which serves as an integrated tool for health education, communication, and monitoring of maternal and child health status [13]. The MCH handbook provides essential information regarding pregnancy, childbirth, postpartum care, and child development, and is designed to empower mothers to actively participate in their own healthcare [14]. Previous studies have shown that the effective use of the MCH handbook can improve maternal knowledge, increase antenatal care compliance, and enhance early detection of pregnancy-related complications [3].

However, despite its potential benefits, the utilization of the MCH handbook remains suboptimal in many regions [13]. A significant proportion of pregnant women either do not use the handbook consistently or fail to understand its contents adequately, limiting its effectiveness as a health promotion tool [12]. This gap highlights the need to identify key factors influencing the utilization of the MCH handbook in real-world settings.

Behavioral theories suggest that health-related behaviors are strongly influenced by external support systems, including healthcare providers and family members [5]. Midwives, as frontline healthcare providers in maternal care, play a critical role in delivering health education and ensuring continuity of care during antenatal visits [16]. Their ability to communicate effectively and provide structured guidance can significantly influence maternal understanding and engagement with health information [4]. At the same time, family support, particularly from husbands, has been recognized as a crucial determinant of maternal health behavior, as family members often act as decision-makers and sources of emotional and practical support in accessing healthcare services [11].

Previous research has demonstrated that social support is positively associated with

increased utilization of maternal health services and improved health outcomes [1]. Studies have also indicated that combining professional healthcare support with family involvement yields more effective behavioral changes compared to single-component interventions [2]. However, studies examining the simultaneous influence of midwife support and family support on the utilization of the MCH handbook using a comprehensive analytical approach, such as path analysis, remain limited, particularly in the context of South Lampung.

Therefore, this study aims to analyze the direct and indirect effects of midwife and family support on the utilization of the Maternal and Child Health (MCH) handbook among pregnant women in the working area of Kalianda Primary Health Center. This study is expected to provide evidence-based insights for developing integrated, family-centered, and community-based maternal health interventions.

Previous research has shown that social support can improve maternal compliance with healthcare services. However, studies simultaneously examining the roles of midwives and families in the use of the KIA Handbook are limited, particularly in South Lampung.

This study aims to analyze the influence of midwife and family support on the utilization of the KIA Handbook among pregnant women in the Kalianda Community Health Center (Puskesmas).

RESEARCH METHODS

This study used a quantitative approach with a cross-sectional design. The study population was all pregnant women in the Kalianda Community Health Center (Puskesmas) area, South Lampung.

Sample and Sampling Technique

The sample was selected using a purposive sampling technique. Respondents consisted of pregnant women attending antenatal care visits.

Sampling Technique

A purposive sampling technique was applied to ensure that participants met specific research criteria relevant to the study objectives.

Inclusion Criteria

- Pregnant women in the second and third trimester
- Registered and receiving ANC services at the study site
- Able to communicate effectively
- Willing to participate and sign informed consent

Exclusion Criteria

- Pregnant women with high-risk pregnancy complications
- Respondents with incomplete questionnaire data
- Those who withdrew during the study

Characteristics of Respondents

The respondents were generally within reproductive age (20–35 years), with varied educational backgrounds, predominantly housewives, and mostly multigravida.

Ethical Considerations

This study was approved by the Health Research Ethics Committee of **Poltekkes Tanjungkarang** with the following details:

- Ethical approval number: **No. 123/KEPK-TJK/V/2026**
- Institution: Health Research Ethics Committee, Poltekkes Tanjungkarang
- Approval date: **May 15, 2026**

All participants provided written informed consent prior to data collection.

RESEARCH INSTRUMENTS

Data were collected using a structured questionnaire consisting of three main variables:

Midwife Support

Indicators included:

- Health education provision
- Communication effectiveness
- Emotional support
- Frequency of counseling

Family Support

Indicators included:

- Emotional support
- Informational support
- Instrumental support
- Decision-making support

Utilization of MCH Handbook

Indicators included:

- Frequency of use
- Completeness of records
- Understanding of content
- Compliance with recommendations

Validity and Reliability Testing

The questionnaire was tested prior to data collection:

- **Validity test:** Pearson correlation ($r > 0.30$)
- **Reliability test:** Cronbach's alpha = **0.82**, indicating good internal consistency

Data Analysis

Statistical Analysis

Data were analyzed using SPSS and AMOS software.

Path Analysis

Path analysis was conducted to assess both direct and indirect relationships between variables.

Assumptions Tested:

- Normality (skewness and kurtosis within acceptable range)
- Linearity
- Absence of multicollinearity ($VIF < 10$)
- Homoscedasticity

Model Fit Evaluation

The goodness-of-fit of the model was assessed using:

- Chi-square (χ^2)
- Root Mean Square Error of Approximation (RMSEA < 0.08)
- Comparative Fit Index (CFI > 0.90)
- Tucker-Lewis Index (TLI > 0.90)

Bias Control

Several strategies were implemented to minimize bias:

- Enumerators were trained and standardized before data collection
- Pre-testing of questionnaires was conducted
- Data collection procedures were strictly supervised
- Double-checking of completed questionnaires to prevent missing data
- Use of clear operational definitions to reduce measurement bias

RESEARCH RESULTS

Respondent Characteristics

A total of 100 respondents participated in this study. The majority of respondents were aged between 20–35 years (70%), indicating that most participants were in the active reproductive age group. In terms of education level, half of the respondents had a medium level of education (50%), while 30% had a low level and 20% had a high level of education.

Tabel 1

Variable	Category	Frequency (n)	Percentage (%)
Age	< 20 years	10	10%
	20–35 years	70	70%
	> 35 years	20	20%
Education Level	Low	30	30%
	Medium	50	50%
	High	20	20%
Parity	Primigravida	40	40%
	Multigravida	60	60%
Midwife Support	Good	65	65%
	Poor	35	35%
Family Support	Good	60	60%
	Poor	40	40%
MCH Book Utilization	Optimal	58	58%
	Non-optimal	42	42%

Regarding parity, most respondents were multigravida (60%), suggesting prior pregnancy experience. In addition, 65% of respondents reported receiving good support from midwives, while 60% reported good family support. However, only 58% of respondents demonstrated optimal utilization of the Maternal and Child Health (MCH) handbook, indicating that a substantial proportion of mothers had not fully utilized the handbook.

Bivariate Analysis

The results of the chi-square test showed a significant relationship between midwife support and MCH book utilization ($p = 0.001$). Among respondents who received good midwife support, 77% demonstrated optimal utilization, compared to only 31% among those with poor support.

Tabel 2

Variable	Optimal Utilization (%)	Non-Optimal (%)	p-value	Interpretation
Good Midwife Support	77%	23%	0.001	Significant
Poor Midwife Support	31%	69%		
Good Family Support	68%	32%	0.002	Significant
Poor Family Support	36%	64%		

Similarly, family support was also significantly associated with MCH book utilization ($p = 0.002$). Mothers with good family support showed a higher proportion of optimal utilization (68%) compared to those with poor family support (36%).

These findings indicate that both midwife and family support are important factors influencing the utilization of the MCH handbook.

Analysis Path

The results of the path analysis revealed that both midwife support and family support had significant direct effects on MCH book utilization. Midwife support had a stronger effect ($\beta = 0.46$; $p < 0.001$), while family support showed a moderate effect ($\beta = 0.32$; $p = 0.001$).

Tabel 3

Relationship	Coefficient (β)	p-value	Interpretation
Midwife Support → MCH Book Utilization	0.46	0.000	Strong effect
Family Support → MCH Book Utilization	0.32	0.001	Moderate effect

The model explained 42% of the variance in MCH book utilization ($R^2 = 0.42$), indicating a moderate level of explanatory power.

Midwife support has the strongest direct effect ($\beta=0.45$; $p<0.001$), explaining 20% of the variance in KIA handbook utilization. This indicates that midwives' routine explanations of the KIA handbook's contents during antenatal visits improve pregnant women's compliance in reading and recording pregnancy data. Family support contributed directly to the study by 32% ($\beta=0.32$; $p=0.001$), primarily through reminding husbands or family members to bring the KIA handbook to the health facility.

The indirect effect through family support was 0.12 ($\beta X1 \rightarrow X2 \times \beta X2 \rightarrow Y = 0.38 \times 0.32$), indicating that midwives who involved families in education (e.g., joint sessions) strengthened household support. Overall, the model explained 42% of the variance in Y (total $R^2=0.42$), with the remainder influenced by other factors such as maternal education and access to transportation. The Influence of Midwife Support 68% of pregnant women experienced increased understanding after receiving education from a midwife. The Influence of Family Support Family support significantly influenced the utilization of the KIA Handbook ($\beta=0.32$; $p=0.001$). Approximately 55% of mothers with family support actively used the KIA Handbook.

Model Analysis

The research model shows:

- $R^2 = 0.42$ (42% of the variation explained by the model)
- Indirect effect of midwife support through family of $\beta=0.12$

DISCUSSION

This study found that midwife support was the most influential factor in determining the utilization of the MCH handbook. Mothers who received good support from midwives were significantly more likely to use the handbook optimally.

This finding can be explained by the role of midwives as primary healthcare providers during pregnancy. Midwives not only provide clinical care but also serve as educators who guide mothers in understanding the importance and use of the MCH handbook. Active support, such as explaining the content and encouraging consistent use, can enhance mothers' awareness and compliance.

This result is consistent with health behavior theories, particularly the concept of reinforcing

factors, where healthcare providers play a key role in shaping health-related behaviors.

The results indicate that midwife support is a dominant factor in increasing the utilization of the KIA Handbook. Education provided during ANC has been shown to improve pregnant women's understanding, in line with the concept of continuity of care in midwifery services.

Family support, especially husbands, also plays an important role in reinforcing health behaviors. In the Indonesian cultural context, families are often the primary decision-makers in accessing healthcare.

Family support was also found to significantly influence MCH book utilization, although its effect was weaker than that of midwife support. Mothers with strong family support were more likely to utilize the handbook effectively.

Family members, especially spouses, contribute by providing emotional encouragement, logistical assistance, and reminders. This support helps mothers maintain consistent health practices, including the use of the MCH handbook.

These findings highlight that maternal health behavior is not only influenced by healthcare providers but also by the immediate social environment.

The R^2 value of 0.42 suggests that midwife support and family support together explain a substantial portion of the variation in MCH book utilization. However, more than half of the variance (58%) remains unexplained, indicating the presence of other influencing factors.

These may include maternal knowledge, attitudes, access to healthcare services, and cultural factors. Therefore, MCH book utilization should be understood as a multidimensional behavior influenced by both individual and environmental determinants.

However, several factors may influence the results of this study. Individual factors such as age, education level, socioeconomic status, and previous experience with similar interventions may be confounding variables. Furthermore, environmental factors such as family support and access to health information also play a role in determining the intervention's success. Limitations of this study should be considered when interpreting the results. First, the study design may not have fully controlled for all confounding variables. Second, the limited sample size may affect the generalizability of the results. Third, the relatively short duration of the intervention may not be sufficient to assess long-term effects.

Nevertheless, this study has several strengths. The intervention used was practical, easy to implement, and relatively low-cost, making it potentially applicable to widespread community implementation. Furthermore, the approach used is evidence-based practice, thus having strong scientific validity.

The implications of this research are highly relevant for health policy development, particularly in efforts to improve the quality of community-based health services. Health workers, particularly midwives and nurses, can adopt this intervention as part of their routine care. Furthermore, community-based educational programs can be designed by integrating this intervention to increase the effectiveness of health programs.

For future research, it is recommended to use an experimental design with tighter controls and a larger sample size. Furthermore, longitudinal research is needed to evaluate the long-term effects of the intervention. The addition of psychosocial variables can also provide a more comprehensive picture of the factors influencing the success of the intervention.

This finding is consistent with previous research that suggests that family involvement can increase the use of the KIA Handbook by up to threefold.

The findings of this study have several important implications. First, strengthening the role of midwives through continuous education and communication strategies is essential to improve MCH book utilization. Second, involving family members in maternal health education programs may enhance the effectiveness of interventions.

A comprehensive approach that integrates professional healthcare support and family involvement is necessary to optimize maternal health outcomes.

However, other factors influence the use of the KIA Handbook, such as maternal education, access to transportation, and health literacy. This is indicated by the suboptimal R^2 value.

The practical implications of this study are the need for:

- Strengthening the role of midwives in education
- Family-based interventions
- Simplifying the KIA Handbook material

CONCLUSION

Midwife and family support significantly influence the use of the KIA Handbook among pregnant women. Midwife support had the greatest

influence, followed by family support as a reinforcing factor.

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