

Education and the Role of Midwife and Family Support in the Use of KIA Handbooks: A Comprehensive Approach

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Abstract: This study aims to explore the role of midwife and family support in the utilization of the Maternal and Child Health Handbook by pregnant women. Study used a quantitative cross-sectional design. The study site was the Kalianda Community Health Center, South Lampung, and included all pregnant women in their first to third trimesters registered with the KIA register. A purposive sampling method was used to select 120 pregnant women, involving 20 midwives as additional data sources. The research instrument, a structured questionnaire, was tested for validity and reliability, showing good results (validity coefficient $r = 0.74-0.82$; Cronbach's Alpha = 0.85). Data were collected through direct interviews by trained enumerators and analyzed using univariate and bivariate analysis techniques, including the Chi-square test. The results show the majority of respondents were aged 20-35 and had a relatively high level of education, which positively impacted their ability to understand health information. Good midwife support was significantly associated with the utilization of the KIA Handbook, with 83.3% of respondents who received good support successfully using the handbook. Family support also showed a positive influence, with 76.4% of respondents who received good support being able to use the KIA Handbook efficiently.

Keywords: Education; Family support; KIA book; Midwife support

Introduction

Family support has a significant impact on disease management outcomes, including Type 2 Diabetes Mellitus (T2DM) (Albahrani, 2024; Ha et al., 2021). A study conducted by Ha et al. (2021) showed that participation in health promotion activities can reduce body weight and improve T2DM management among patients, where participatory support from the family is very important. Meanwhile, Albahrani (2024) explained that family-based education programs can improve patients' independent behavior and clinical outcomes. This highlights the important role of the family in supporting individual health, especially during critical periods such as pregnancy and postpartum.

Midwives function as health educators who can utilize the KIA handbook to provide mothers and their

families with relevant and easily understood information about maternal health. By using the handbook, midwives can provide better health education, which is expected to encourage family involvement and improve coherence in health-related decision-making. A better understanding of the material in the KIA handbook can help families be more proactive in supporting pregnant women and their children, which in turn contributes to improving overall community health (Nurfurqoni et al., 2023).

Part of the challenges in implementing such programs include a lack of appropriate knowledge and education among healthcare providers themselves. Developing competencies in patient- and family-centered care needs to be prioritized in healthcare institution training (Parmar et al., 2021). The family's role as a key contributor to the success of health

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programs must be maximized through training that includes effective communication, emotional support, and health education (Parmar et al., 2021).

Psychological and social support from families also plays a crucial role in influencing how pregnant women and other patients respond to health programs. In public settings, family health support can play a significant role in increasing awareness and adoption of better health practices (Alyahya et al., 2023; Quesada et al., 2020). Therefore, midwives are required not only to provide medical services but also to involve families in health education, thereby creating a supportive environment for patients. For example, among diabetes patients, family support improves patient adherence to treatment and promotes a healthy lifestyle (Happi et al., 2021; Wulandari et al., 2021). This shows that families are not just physical supporters, but also need to be involved in the learning process about health.

Family awareness and participation in health programs based on the KIA guidelines can increase mothers' independence in making decisions about their own and their children's health. With this approach, it is hoped that each mother can understand and apply the information from the guidebook in a more contextual and applicable way in their daily lives. This initiative needs to be supported by various comprehensive measures, including interprofessional collaboration in providing integrated services (Hartmann-Boyce et al., 2020).

The aim of this study was to explore the role of midwife and family support in the utilization of the Maternal and Child Health Handbook (KIA) by pregnant women. The novelty of this research lies in the integration of a holistic approach that combines education, the role of midwives, and family support in the use of the Maternal and Child Health Handbook

(KIA Handbook). Previous studies on the KIA Handbook have tended to focus on these aspects individually. This study proposes an intervention model involving collaboration between midwives and family members to improve understanding and effective use of the KIA Handbook, contributing to the reduction of maternal and child mortality. Furthermore, this study investigates how midwife training and education for families can strengthen their role in health promotion. By making the use of the KIA Handbook the focus of the intervention, this study offers a new, practical approach that has the potential to improve public health outcomes and strengthen community engagement in reproductive and child health.

Method

Research Design

This study is a quantitative study with a cross-sectional design, which aims to observe and analyze phenomena at a single point in time. This approach allows researchers to explore relationships between variables without incorporating experimental interventions, thus providing real-time insights into midwife and family support and the utilization of the KIA Handbook among pregnant women. This design was chosen due to its simplicity and ability to provide data that is representative of the population studied.

Research Location

The research was conducted in the working area of Kalianda Community Health Center, South Lampung, from January to May 2025. Kalianda Community Health Center was chosen because it is one of the main health facilities for the local community, especially for pregnant women.

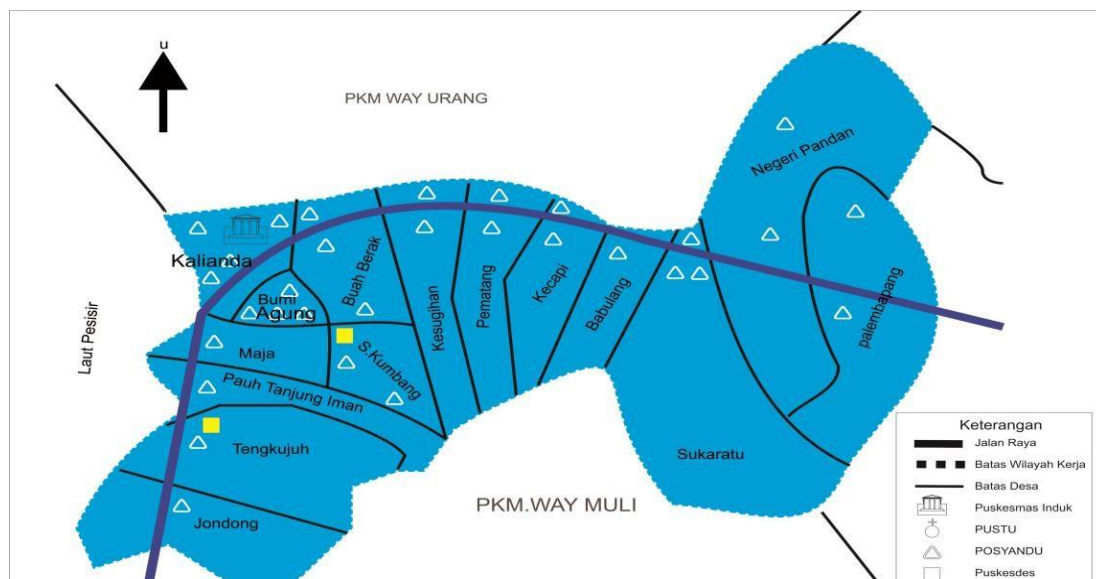


Figure 1. Research location

Research Population

The study population was all pregnant women in their first to third trimesters registered in the Maternal and Child Health (KIA) register at the Kalianda Community Health Center. This criterion is important because pregnant women in this trimester can provide a clear picture of the support they received and the use of the KIA Handbook since the beginning of their pregnancy. The availability of comprehensive data in the KIA register makes this population an ideal target for my research, as the register records important information related to health status and utilization of healthcare services.

Research Sample

The number of samples taken in this study was 120 pregnant women. The sample selection was carried out using purposive sampling, namely selection based on certain predetermined criteria, so that it can meet the objectives of the study. The inclusion criteria included pregnant women who were willing to be respondents in this study, pregnant women who had a KIA Book, which reflected their health records during pregnancy, and able to read and understand Indonesian, so they were able to answer the questionnaire accurately. In addition, as many as 20 midwives were also involved in this study as a source of supporting data, providing additional perspectives related to the support they provide to pregnant women.

Research Instruments

The research instrument used was a structured questionnaire, specifically designed to collect data related to research variables such as midwife support, family support, and utilization of the KIA Handbook. The questionnaire included several questions divided into several sections that highlighted different aspects of support and utilization of the KIA Handbook. The validity of the instrument was tested by producing a validity coefficient value between $r = 0.74-0.82$, indicating that the questionnaire was valid enough to be used in this study. In addition, the reliability of the questionnaire was assessed using Cronbach's Alpha which was obtained at 0.85, indicating high consistency of the questionnaire.

Data Collection Procedures

Research data was collected through direct interviews by trained enumerators, consisting of midwives and integrated health post (Posyandu) cadres. These direct interviews provided respondents with the opportunity to ask questions and provide further explanations if needed, which improved the

quality of the data obtained. The interview approach also allowed researchers to observe non-verbal cues that could add depth to the data analysis. Training for enumerators included an explanation of the research objectives, questionnaire completion methods, and ethical behavior in interacting with respondents, ensuring the integrity and confidentiality of the information provided.

Data Analysis

After data collection was completed, data analysis was carried out in two main stages: univariate analysis and bivariate analysis. Univariate analysis aimed to describe the characteristics of respondents based on demographics and the main variables studied, thus providing an overview of the study population, including age, education level, and parity. This analysis was conducted using relevant statistical software, which allows for data visualization in tabular and graphical forms for easy understanding. Next, bivariate analysis was conducted to examine the relationship between the study variables, which was carried out using the Chi-Square test as the main method. This test was chosen because of its suitability for analyzing categorical data and its ability to determine whether there is a significant relationship between midwife and family support and the use of the KIA Handbook. The significance level set was $\alpha = 0.05$, which is a common standard in quantitative research to determine the closeness of conclusions to the null hypothesis. The results of this analysis will be used to address the research problem and provide data-based recommendations for future practice.

Results and Discussion

A significant proportion of mothers fell within the 20 to 35 age brackets, comprising 73.3% of the sample, while a mere 8.3% were aged under 20. Regarding educational attainment, nearly half (48.4%) of the respondents had completed high school, and 10% had only reached primary education. The labor market status of the mothers revealed that the majority were housewives (58.3%), with lesser representation among farmers or workers (12.5%) and salaried employees (8.4%). Concerning parity, half of the mothers were classified as multigravida, indicating that they bore two to three children. In terms of gestational age, a plurality (45.9%) of the mothers were in their third trimester. Collectively, these findings elucidate the demographic and socioeconomic characteristics of the mothers involved in the research.

Table 1. Respondent characteristics (n = 120)

Characteristics	Category	Frequency (n)	Percentage (%)
Mother's Age (years)	< 20	10	8.30
	20-35	88	73.30
	> 35	22	18.40
Education	Elementary School/Equivalent	12	10.00
	Junior High School/Equivalent	25	20.80
	High School/Equivalent	58	48.40
	College	25	20.80
Work	Housewife	70	58.30
	Farmers/Laborers	15	12.50
	Private/Self-Employed	25	20.80
	Civil Servants/TNI/Polri	10	8.40
Parity	Primigravida (1 child)	40	33.30
	Multigravida (2-3 children)	60	50.00
	Grand multipara (≥ 4)	20	16.70
Trimester of Pregnancy	First trimester	25	20.80
	Second Trimester	40	33.30
	Third Trimester	55	45.90
Total		120	100.00

Table 2 presents the relationship between midwife support, family support, and utilization of the Maternal and Child Health Handbook (KIA) among pregnant women. This table categorizes respondents into two categories based on their level of utilization of the KIA Handbook: good utilization and poor utilization. In the good utilization category (n = 72), 83.3% of pregnant women who received good support from midwives reported good utilization of the KIA Handbook. In contrast, only 16.7% of those who did not receive midwife support reported good utilization. The chi-

square (χ^2) test showed a value of 32.15 with a p-value of 0.000, indicating a statistically significant relationship between midwife support and utilization of the KIA Handbook. Similarly, family support also played a significant role; 76.4% of mothers who received good family support reported high utilization of the KIA Handbook, while only 23.6% of those from low-income families reported the same, with a chi-square test result of 18.94 and a p-value of 0.000. This shows that both midwife and family support significantly influence the use of the KIA Handbook.

Table 2. Relationship between midwife and family support and utilization of KI books

Variables	Good utilization of kia books (n=72)	Utilizationless (n=48)	Total	X ² count	P-value
Good midwife support	60 (83.30%)	12 (25.00%)	72	32.15	0.000
Lack of midwife support	12 (16.70%)	36 (75.00%)	48		
Supportgood family	55 (76.40%)	15 (31.30%)	70	18.94	0.000
Supportunderprivileged families	17 (23.60%)	33 (68.70%)	50		

The integration of health education into maternal care through the use of MCH handbooks represents an advancement in improving reproductive health outcomes. The data presented from the respondent characteristics suggests a community primarily consisting of women aged 20 to 35 years, reflecting those who are typically pregnant and would benefit from targeted educational resources. Notably, a significant majority (73.3%) of respondents fell within this age range, a trend mirrored in other studies considering the reproductive health needs of this demographic (Nannyonga & Singull, 2020; Tunkara-Bah et al., 2021).

Furthermore, the education level of the respondents has implications for the perceived quality and effectiveness of health education interventions. With approximately 69.2% of respondents holding at

least a senior secondary education diploma, individuals may possess a greater capacity to acquire and utilize health information compared to populations with lower educational attainment (Tian et al., 2023). This educational background may enhance their understanding of and adherence to the guidelines provided in the KIA handbooks.

The education level of individuals significantly influences the perceived quality and effectiveness of health education interventions. Respondents with higher educational attainment, such as those holding a senior secondary diploma or higher, are generally better equipped to acquire and utilize health information, potentially leading to improved health outcomes compared to those with lower educational attainment. A robust correlation exists between education levels and health literacy, which is defined as the ability to

access, understand, and apply health-related information effectively. Research consistently shows that higher levels of education correlate with better health status and adherence to health recommendations (Chen et al., 2024; Yang & Yu, 2023). This underscores the importance of educational initiatives aimed at populations with lower educational attainment to promote effective health behaviors and enhance overall public health outcomes.

Moreover, the design of health education interventions must take into account the interplay between educational attainment and the quality of the messages delivered. Effective health education requires not only the dissemination of information but also tailored approaches that account for the existing knowledge and literacy levels of the target population. Interventions that incorporate engaging and easily comprehensible content are more likely to resonate with the educational backgrounds of the respondents, enhancing their motivation to act on health information (Tong et al., 2022; Yan et al., 2022). Furthermore, the quality of educational interventions is significantly influenced by the competencies of health educators, affecting participants' satisfaction and learning outcomes (Mohammadnabizadeh et al., 2023). Hence, when developing educational programs, it is crucial to provide materials that align with participants' educational levels to maximize comprehension and adherence.

The relationship between support from midwives and families and the effective utilization of KIA handbooks presents compelling evidence for the significant roles these support systems play in health education uptake. Data shows that among those receiving good midwife support, a significant majority utilized the KIA handbook effectively, while those with insufficient midwife support reported substantially lower usage (Zhou et al., 2022). This highlights the critical role midwives play not only as healthcare providers but also as educators who facilitate health literacy, a point supported by literature documenting midwifery as vital for antenatal health education (Buchanan et al., 2020).

Similarly, family support emerged as a considerable factor influencing utilization rates, with a substantial proportion of women receiving adequate familial support effectively using their KIA handbooks. Strong family involvement in maternal health care correlates with improved health-seeking behaviors and practical health outcomes (Tunkara-Bah et al., 2021). Research corroborates these findings by indicating that involvement from family members, particularly partners, leads to enhanced birth preparedness and health literacy among mothers (Rizvi, 2022).

Family support plays a critical role in enhancing the effective use of maternal health resources, such as the KIA handbooks. A considerable amount of research underscores the importance of familial involvement during pregnancy, indicating that strong family networks substantially increase health-seeking behaviors among expectant mothers. For instance, documented a correlation between the presence of family support and improved health outcomes, demonstrating that women with adequate familial backing tend to engage more significantly with maternal health care services (Caldeira et al., 2024). Furthermore, Mane et al. (2024) corroborate these findings by highlighting how partner and family involvement enhances mothers' birth preparedness and health literacy, thereby positively influencing maternal healthcare practices. Such support mechanisms create an environment that fosters informational access as well as emotional and practical assistance during the transition to motherhood (Caldeira et al., 2024; Mane et al., 2024).

The multifaceted benefits of family support extend beyond immediate healthcare utilization to include improved psychosocial aspects of maternal health. Literature indicates that social and emotional support from partners and family members serves as a protective factor against mental health issues during pregnancy. Emotional support networks, which encompass family and friends, effectively mitigate the stresses associated with gestation, thereby enhancing maternal mental health (Caldeira et al., 2024). This socio-emotional backing is crucial, particularly in times of vulnerability—a concept echoed by (Lima et al., 2024), which emphasizes that family support correlates with lower incidences of maternal mental health challenges. Overall, the interplay of familial engagement enriches health-seeking behavior and promotes a holistic approach to maternal well-being, ensuring that emotional, social, and informational needs are met (Caldeira et al., 2024; Lima et al., 2024).

Moreover, the high percentage of multigravida women (50%) among respondents points to the ongoing need for continuous education and support throughout multiple pregnancies. Experienced mothers may benefit from tailored health education addressing specific challenges encountered in subsequent pregnancies (Kadir & Schütze, 2022). Addressing the unique needs of primigravida and grande multipara women in the health education curriculum can lead to improved health outcomes by ensuring that education is both relevant and personalized (Can et al., 2021).

In dissecting the chi-square analyzes presented, a clear statistically significant relationship suggests that the quality of interpersonal interactions between health professionals and patients significantly alters health

education outcomes (Wang & Zhu, 2025). The findings support the necessity of quality engagements within healthcare settings and suggest the potential for training programs aimed at enhancing the educational competencies of midwives within the healthcare system (Yan et al., 2022).

To sum up, the role of health education, particularly through KIA handbooks, is significant in its impact on maternal health outcomes. The support structures present in midwifery and family involvement play pivotal roles in how effectively health education is assimilated and utilized. These findings echo through various studies emphasizing the interdependency of familial support structures and professional healthcare guidance as key components in fostering an informed and healthier population (Cardina & Panek-Shirley, 2020; Lee et al., 2021). Thus, incorporating the feedback from practicing midwives and community structures into future health education programs will enhance their relevance and effectiveness, thereby aiming to improve overall health equity and accessibility in maternal health services (Dong, 2024; Li et al., 2020).

Conclusion

The integration of health education through the MCH handbook significantly contributes to maternal health outcomes, particularly among women aged 20 to 35, who are a vulnerable population in the context of pregnancy. The data indicate that higher levels of education among respondents not only increase their capacity to access and understand health information but also positively impact adherence to health instructions. Support from midwives and families plays a crucial role in the utilization of MCH resources, suggesting that these support systems improve mothers' engagement and health-seeking behavior. The study also highlights the need for educational approaches tailored to individual needs, including prior experiences with pregnancy. Active involvement in family support structures and the support of health professionals has been shown to improve the understanding and application of health information, which in turn contributes to better health outcomes. Therefore, it is important to develop health education programs that consider input from practicing midwives and the community to enhance their relevance and effectiveness, and to pursue a better health balance in maternal health services.

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Concept, methodology and software, validation and formal analysis, writing—original draft preparation, project administration, funding acquisition: I.F.E., N., N., and E.B.

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Conflicts of Interest

The authors declare no conflict of interest.

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