

UTILISATION OF THE KIA BOOK USE ON KNOWLEDGE AND BEHAVIOR DURING PREGNANCY

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ABSTRAK: PEMANFAATAN BUKU KIA TERHADAP PENGETAHUAN DAN PERILAKU KESEHATAN SELAMA KEHAMILAN

Latar Belakang: Angka kematian ibu (AKI) masih menjadi tantangan kesehatan masyarakat yang signifikan, terutama di negara berpenghasilan rendah dan menengah. Sebagai respons terhadap target global seperti Sustainable Development Goals (SDGs), pemerintah Indonesia mendorong pemanfaatan Buku Kesehatan Ibu dan Anak (KIA) untuk meningkatkan pengetahuan dan perilaku ibu selama kehamilan. Namun, pemanfaatan dan efektivitas Buku KIA masih belum optimal.

Tujuan: Penelitian ini bertujuan untuk mengetahui hubungan antara pemanfaatan Buku KIA dengan pengetahuan dan perilaku ibu hamil di wilayah kerja Puskesmas Jatibarang, Kabupaten Brebes, pada tahun 2024.

Metode: Penelitian ini merupakan studi kuantitatif dengan sampel sebanyak 197 ibu hamil yang dipilih menggunakan rumus Slovin dari populasi 314 orang. Data primer dikumpulkan melalui kuesioner dan dianalisis menggunakan uji korelasi Spearman untuk melihat hubungan antara variabel pemanfaatan Buku KIA, pengetahuan, dan perilaku ibu hamil.

Hasil: Hasil penelitian menunjukkan bahwa 62,40% ibu hamil memanfaatkan Buku KIA dengan baik, 54,20% memiliki pengetahuan dalam kategori cukup, dan 94,40% menunjukkan perilaku kesehatan positif. Namun, analisis korelasi Spearman menunjukkan tidak ada hubungan yang signifikan antara pemanfaatan Buku KIA dengan pengetahuan ($p = 0,009$; $p = 0,899$), pemanfaatan Buku KIA dengan perilaku ($p = -0,006$; $p = 0,933$), maupun antara pengetahuan dengan perilaku ibu hamil ($p = 0,132$; $p = 0,065$). Meskipun terdapat kecenderungan positif antara pengetahuan dan perilaku, hubungan tersebut tidak signifikan secara statistik.

Kesimpulan: Temuan ini menunjukkan bahwa penggunaan Buku KIA secara fisik saja belum cukup untuk meningkatkan pengetahuan dan mengubah perilaku ibu hamil. Faktor lain seperti tingkat literasi, pendampingan tenaga kesehatan, serta dukungan keluarga atau sosial berperan penting. Optimalisasi Buku KIA sebagai media edukasi memerlukan pendekatan pendidikan kesehatan yang terstruktur, konseling yang mendukung, dan keterlibatan aktif tenaga kesehatan dengan pendekatan andragogi.

Kata Kunci: Buku KIA, pengetahuan, perilaku kesehatan

ABSTRACT

Background: Maternal mortality remains a significant public health challenge, particularly in low- and middle-income countries. In response to global initiatives such as the Sustainable Development Goals (SDGs), the Indonesian government promotes the use of the Maternal and Child Health (KIA) Book to improve maternal knowledge and behavior during pregnancy. However, the utilization and effectiveness of the KIA Book remain suboptimal.

Objective: This study aims to examine the relationship between the utilization of the KIA Book and pregnant women's knowledge and behavior in the working area of the Jatibarang Brebes Health Center in 2024.

Methods: This quantitative study involved 197 pregnant women selected through Slovin's formula from a population of 314. Primary data were collected via questionnaires and analyzed using Spearman correlation tests to assess relationships among the variables: KIA Book utilization, knowledge, and behavior.

Results: The study found that 62.40% of pregnant women demonstrated good utilization of the KIA Book, 54.20% had moderate knowledge, and 94.40% exhibited positive health behavior. However, Spearman correlation analysis showed no significant relationships between KIA Book utilization and knowledge ($p = 0.009$, $p = 0.899$), utilization and behavior ($p = -0.006$, $p = 0.933$), nor knowledge and behavior ($p = 0.132$, $p = 0.065$). Although a positive trend was observed between knowledge and behavior, it was not statistically significant.

Conclusion: The findings suggest that the use of the KIA Book alone is insufficient to improve knowledge and behavior among pregnant women. Other influencing factors such as literacy level, health worker facilitation, and family or social support may play more substantial roles. Optimizing the KIA Book as an educational tool requires structured health education, supportive counseling, and active involvement of healthcare providers using adult learning principles.

Keywords: KIA Book, knowledge, behavior health.

INTRODUCTION

Maternal mortality is a public health challenge around the world. In 2020 an estimated 287,000 women died during and after pregnancy and childbirth, nearly 95% of all maternal deaths occurred in low and middle income countries, when in fact they were preventable. MMR in 2020 in low-income countries was 430 per 100,000 live births while in high income countries it was 13 per 100,000 live births. One of the triggers for high MMR such as social factors including low income, access to education. To improve maternal health services are needed and must be identified and overcome both at the health system level and in the community.

The United States' Sustainable Development Goals (SDGs) are to achieve the target of accelerating the reduction of MMR by 2030 with the target of reducing MMR to less than 70 per 100,000 births where the global MMR in 2020 is 223 per 100,000 live births. The need for intensive, coordinated efforts to mobilize and re-strengthen commitments at the global, regional, national and community levels to end preventable MMR (World Health Organization, 2024)

The Indonesian Ministry of health has a strategic plan for 2020-2024 which has 3 main objectives, including: Increasing the resilience of the health service system to address global health threats through prevention, detection and response capabilities, improving public welfare, improving the health and nutritional welfare of the Indonesian people by strengthening cross-sectoral health measures to advance health in all policies (World Health Organization, 2024).

One of the implementations in order to reduce MMR and IMR is to increase the resilience of the health service system through prevention, detection and response capabilities by using the KIA Book as a record of maternal health during pregnancy, childbirth and postpartum as well as child registration from infant to 6 years of age (Firmansyah, 2019). The use of KIA books is still not optimal, based on data from the Directorate of Family health, the use of KIA Books in 2016 amounted to 18 percent which was filled completely

out of a total 81,5% of KIA book ownership (Arlinta, 2018).

The KIA Book that is supposed to enhance mother's knowledge as a medium for communication and education, as well as effective and efficient record-keeping, is still not being utilized optimally, there is a need for advocacy efforts to support the optimization of the use of this KIA book.

Knowledge is the first step to changing quoting behavior from the research of Scrader and lawless, which describes a relationship between knowledge and behavior. Behavior influences attitudes, and thus attitudes will impact individuals, potentially increasing knowledge. However, this is dynamic in nature, as individuals with good knowledge may have an inverse relationship with the behavior they exhibit (Citizenship, 2020).

Based on the identified issues, the researcher is interested in conducting a study on "Utilisation of the KIA Book use on Knowledge and behavior during Pregnancy in the working area of the Jatibarang Brebes Health Center in 2024"

RESEARCH METHODS

This research uses primary data obtained from questionnaires filled out by respondents, specifically pregnant women in the work area of the Jatibarang Brebes Health Center in 2024. The study was conducted from April to May 2024. Research is the creation of new knowledge or the utilization of existing knowledge in new ways, leading to new concepts, methodologies, and understandings, which include the synthesis and analysis of previous research to achieve new outcome (Western Sydney University, 2023). The variables used in this study are the Utilization of KIA Books on Knowledge and Health Behavior, with a total population of 314 and the sample size calculated using Slovin's formula resulting in a sample of 197 pregnant women. This study is quantitative research with data analysis method using Spearman correlation to test the relationship between variables.

An important component in research is the research variable. There are 2 variables in this

research, the independent variable and the dependent variable. The dependent variable is influenced by the explained variable, is the focus of the research, and is the condition that the researcher wants to explain, describe, and predict. The independent variable is the variable that we predict explains changes in the dependent variable (Johnson, 2015). The independent variable in this study is the utilization of the Maternal and Child Health KIA books, while the dependent variables consist of pregnant women's knowledge and health behaviors. Data were collected using a structured, closed-ended questionnaire comprising 6 items related to the utilization of the KIA Books, 18 items assessing knowledge regarding maternal health during pregnancy, and 15 items measuring health behaviors among pregnant women. Primary data collection techniques included both interviews and questionnaire.

RESEARCH RESULT

Univariate Analysis the frequency distribution of the variable can be seen in the following table :

Table 1
Characteristics of Respondents

Characteristics of Respondents	F	%
Use of KIA Book		
Good	123	62,40
Not Good	74	37,60
Knowledge for Pregnant Mothers		
Good	89	45,20
Quite good	108	54,20
Not Good	0	0,00
Health Behavior of Pregnant Woman		
Positive	186	94,40
Negative	11	5,60

Based on the table, it shows that 62,40% of pregnant women use the KIA book well and 37,60% of pregnant women use the KIA Book poorly. The Knowledge of pregnant women about pregnancy is 54,20% adequate (quite good) and 45,20% have good knowledge, 94,40% have positive health behavior and 5,60% have negative health behavior.

The use of the KIA Book includes carrying the KIA book to every chek-up, understanding in the information provided in the KIA book through reading, there are still 37,60% of mothers who are not good at using the KIA book. Just like other KIE

media, the KIA book is also used as a medium to enhance mothers understanding of pregnancy, childbirth, infants and toddlers. In this era, KIE Media is one of the important components in enhancing the understanding and knowledge from midwives to patients through the use of highly interactive KIA books, which contain all the information related to pregnancy, is very beneficial. However, if the use of KIA books is not optimal, many important pieces of information may not be understood by pregnant women, as they only receive information during pregnancy chech-up. The KIA book is the only comprehensive family book that contains important health information and records kept by pregnant women and can be used as a communication tool between the mother, family and healthcare providers in providing care. With the presence of the KIA book, it is hoped that mothers will be motivated to return to health facilities for services and to read the contents of the KIA book.

There is data showing that 54,20% of pregnant women have sufficient knowledge about pregnancy, knowledge according to Merriam wbster in the book by Rahman zohuri et al. Is the fact or condition of knowing, which is obtained through experience, recognition, understanding of knowledge or fact that make one aware of something based oon the truth of the information and principles acquired by human (Zohuri, Mossavar-Rahmani, & Behgounia, 2022).

The human brain has the ability to generate knowledge through the selection and processing of data (information) and then apply it. Research on the brain has shown that the left brain is associated with verbal skills such as knowledge and reason. Knowing how to make decisions and take action is a basic human need, so knowledge can be defined as a power that helps people be more effective in what they do. In fact, knowledge is more powerful than physical ability, and through knowledge, people are able to accomplish things. Therefore, the better the knowledge, the better health behaviors are expected ti be practiced.

The use of the KIA book is a strategy for empowering the community, especially for families, to maintain healthcare services. In Addition, the KIA books contains important notes or massages needed by pregnant woman, making it easier to remember the interventions that must be carried out by pregnant women. Health promotion through the use of the KIA Book is very good and should be able to influence behavior, Behavioral changes will be better if the provision of health promotion is according to targets and needs, such as the KIA

book, its purpose is also clear so that its benefits are expected to be more on target. The change process can be used to address health behavior in accordance with the function of the development program, namely to identify the targets of each component, such as at-risk populations that can identify environmental controls and objectives for example, improving health behavior in pregnant women (Simons-Morton & Lodyga, 2022).

Bivariate Analysis

This study aims to determine the relationship between the use of the KIA book and the knowledge and behavior of pregnant women, as well as the relationship between knowledge and behavior. The analysis was conducted using the Spearman correlation test due to the ordinal nature of the data. The following are the results of the Spearman correlation test between the variables:

Table 2
Spearman correlation test result between KIA book utilization, knowledge and behavior of pregnant women

Variable	Korelasi Spearman ρ	Sig (p -value)
Utilization of KIA Books VS Knowledge of pregnant women	0,009	0,899
Utilization of KIA Books VS Behavior of Pregnant women	-0,006	0,933
Knowledge of pregnant women VS Behavior of Pregnant women	0,132	0,065

The relationship between KIA books utilization and pregnant women's knowledge

The analysis results showed a Spearman correlation of $p=0,009$ with a significance value of $p=0,899$. The value indicates no significant relationship between KIA books utilization and pregnant women's knowledge. This very weak correlation suggests that the KIA books have not been effective in directly improving pregnant women's knowledge. The results indicate that although 62% of respondents were categorized as having good use of the KIA books, this did not significantly correlate with their level of knowledge, with only 54,20% categorized as having sufficient knowledge. This indicates that physical use of the KIA books does not necessarily translate into a good understanding of its contents, or is not yet effective in improving the knowledge of pregnant women. Influencing factors include pregnant women's literacy skills, including low educational levels, which can hinder their understanding of the book's contents. These results align with previous research showing that without a structured educational approach, the KIA book does not automatically improve mother's knowledge (Wulandari, 2020) (Kementerian Kesehatan Republik Indonesia, 2021). Therefore, additional interventions such as outreach, counseling, and training for health workers are needed to improve the quality of the KIA books use as an educational medium. The KIA Book should function not only as a documentation tool but also as an effective communication and education tool for pregnant women.

The health belief model explains that a person will engage in health behavior if they feel they have sufficient understanding and perception of the health benefits and threats. Without understanding (such as a lack of education about the contents of the KIA books), the likelihood of utilization is low (Rosenstock, 1998). This theory emphasizes (such as through the KIA books) is only effective if accompanied by increased knowledge and skills. Print media such as the KIA books require facilitation to maximize their use. According to adult learning theory (andragogy), adults learn best when the learning process is relevant, participatory, and facilitated by competent mentors. The KIA Books as an educational medium will be more effective if accompanied by explanations from health workers (Knowles, 2015). The Indonesian Ministry of Health emphasizes that the KIA books are not merely a medical record, but also an educational tool that needs to be explained by health workers (Kementerian Kesehatan Republik Indonesia, 2020). Research (Guntara, 2024) found that pregnant women's understanding of the KIA Books remains low, despite its distribution.

The Relationship between the use of KIA Books and the Behavior of pregnant women

The results of the Spearman correlation analysis showed that there was no significant relationship between the use of the MCH (Maternal and Child Health) Handbook and pregnant women's behavior, as indicated by the correlation coefficient (ρ) = -0.006 and the significance value (p) = 0.933. This finding suggests that, statistically, the level of

utilization of the KIA Book is not correlated with changes in pregnant women's behavior in maintaining their pregnancy.

However, the descriptive data showed that the majority of respondents (62.40%) fell into the category of good utilization of the KIA Book, and most pregnant women (94.40%) demonstrated positive behavior. The discrepancy between the correlation result and the descriptive data indicates the possibility of other dominant factors influencing pregnant women's behavior, beyond just the use of the KIA Book. These factors may include educational background, previous pregnancy experience, family support, and the intensity and quality of interactions between the mother and healthcare providers.

According to the Health Belief Model (Becker, 1974), individual health behavior is strongly influenced by perceived benefits and barriers to action, as well as cues to action. In this context, the presence of the KIA Book may not have a significant impact unless accompanied by understanding of its content and educational support from healthcare providers. Effective education can shape positive perceptions and increase pregnant women's awareness to take promotive and preventive actions during pregnancy.

Previous studies also support this finding (Wulandari A. P., 2020) stated that simply distributing the KIA Book is not sufficient to improve pregnant women's knowledge and health behavior. This is in line with the report from the (Kementrian Kesehatan Republik Indonesia, 2021), which emphasized the crucial role of healthcare workers in explaining the contents of the KIA Book and providing direct guidance to pregnant women. Therefore, it can be concluded that the use of the KIA Book needs to be optimized through a structured and intensive educational approach in order to truly contribute to improving pregnant women's health behavior.

The relationship pregnant womens knowledge and the behavior of pregnant women

The results of the study showed a Spearman correlation value of $\rho = 0.132$ with a significance level of $p = 0.065$. Although this is not statistically significant ($p > 0.05$), the positive direction of the correlation indicates a tendency that the higher the pregnant mother's knowledge, the more positive the behavior she demonstrates in maintaining her pregnancy. This suggests that knowledge does play a role in shaping behavior, although it is not the only determining factor.

The data show that 54.20% of pregnant women had knowledge in the "moderate" category, while 94.40% exhibited positive behavior. This phenomenon indicates that there are other factors beyond knowledge that influence behavior, such as previous pregnancy experiences, family support, access to information, and the quality of communication with healthcare providers (Rokhmah, 2022)

Based on the Health Promotion Model (HPM) by Nola J. Pender, this model emphasizes that health behavior results from the interaction between personal experiences, individual characteristics, perceived benefits and barriers, as well as social and environmental influences (Pender, 2011).

In the context of pregnant women: perceived benefits such as the belief that healthy behaviors lead to a safe pregnancy, self-efficacy or the mother's confidence in her ability to engage in healthy actions, and interpersonal support from husbands and healthcare workers, are important factors that reinforce positive behavior even when knowledge is not yet optimal. This is supported by findings from (Wulandari S. R., 2020), which show that without adequate educational interventions and social support, knowledge alone is insufficient to change behavior. Therefore, in improving the behavior of pregnant women, a comprehensive approach is needed one that not only enhances knowledge but also strengthens motivation, self-confidence, and creates an environment that supports behavioral change.

CONCLUSION

The results of this study reveal that although the majority of pregnant women demonstrate good utilization of the KIA Book (62.40%) and exhibit positive health behavior (94.40%), statistical analysis shows no significant correlation between the use of the KIA Book and either knowledge ($p = 0.009$, $p = 0.899$) or health behavior ($p = -0.006$, $p = 0.933$). Likewise, the correlation between knowledge and health behavior is weak and not statistically significant ($p = 0.132$, $p = 0.065$), although it shows a positive trend.

These findings suggest that the physical use of the KIA Book alone does not effectively translate into improved knowledge or behavioral changes in pregnant women. Several factors may contribute to this, including the mothers' literacy level, lack of structured educational support, and limited understanding of the KIA Book's content. Moreover, positive health behavior is likely influenced by other determinants such as prior pregnancy experience,

family support, and the quality of communication with healthcare providers.

The study underscores the importance of a comprehensive educational approach in utilizing the KIA Book. Merely distributing the book is insufficient; it must be supported by counseling, explanation, and active facilitation by healthcare providers. The application of health behavior theories such as the Health Belief Model and the Health Promotion Model reinforces the need for personal motivation, perceived benefits, self-efficacy, and social support to drive behavioral change. Therefore, optimizing the use of the KIA Book as an effective communication and education tool requires interactive, personalized, and structured health education strategies that target both knowledge and behavior among pregnant women.

SUGGESTION

For Health Workers (Midwives, Nurses, and MCH Officers) It is recommended that health workers not only distribute the MCH (KIA) Book but also provide direct, structured, and continuous education regarding its content and importance. Both individual and group counseling should be conducted to ensure that pregnant women understand and are able to apply the information provided in the KIA Book. For Pregnant Women Pregnant women are encouraged to be more proactive in reading and understanding the contents of the KIA Book and to use it as a guide throughout their pregnancy. Bringing and presenting the KIA Book during every visit to health facilities is also important to maximize its function as a communication tool between mothers and healthcare providers. For Health Service Institutions It is necessary to improve the quality of health promotion using an andragogical approach (adult learning), including training health workers in effective communication skills so that the KIA Book can serve as an educational medium, not merely a documentation tool. For the Government and Policymaker Policies should be strengthened to reinforce the use of the KIA Book as an educational tool rather than just for administrative purposes. This can be supported through routine training, implementation monitoring, and regular evaluation of KIA Book usage in the field. For Future Researchers Further research is needed to explore other factors influencing pregnant women's health behavior, such as the role of husbands, local cultural practices, digital media, and community-based interventions, to enhance the effectiveness of the KIA Book as an educational medium.

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