



## The relationship of health education to knowledge pregnant women about KIA books

Rosmaini Sinaga

<sup>1</sup> STIKes Mitra Husada Medan

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### ABSTRACT

Backgrounds: The infant mortality rate (IMR) and maternal mortality rate (MMR) are still the main problems in the world because they are still fairly high. World Health Organization (WHO) data states that in the world about 800 mothers die every day due to complications of pregnancy and childbirth. The Ministry of Health has printed and distributed MCH Books to regions amounting to 94% of the target number of pregnant women, and all Puskesmas have received MCH Books, but only 60.5% can show MCH books. This study aims to determine the relationship between health education and pregnant women's knowledge about MCH books in Suka Makmur village, Deli Tua district, Deli Serdang Regency in 2021. Method: This type of research is a quasi-experiment with a design of one group pretest and post test, namely pretesting is carried out first before being given intervention to respondents which then after being given intervention then post test is carried out. Sampling was carried out using the total sampling technique, namely all pregnant women were used as research samples. where the sample in this study was 20 respondents. Data collection techniques using questionnaire sheets. Bivariate analysis technique using chi square test. Results: from the results of the study that pregnant women's knowledge about MCH books before being given health education is the majority with sufficient categories, namely 10 people (100%) with pregnant women's knowledge about MCH books after being given health education is in the good category of 7 people (70.0%), enough namely 3 people (30.0%) and less there.

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### Kata kunci:

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#### \*) corresponding author

Rosmaini Sinaga

STIKes Mitra Husada Medan  
Jl. Parang II Gg. Ate Malem No. 08 Kel.  
Kwala Bekala, Kec. Medan Johor

Email: rosmani11@gmail.com

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### ABSTRAK

Latar Belakang: Angka kematian bayi (AKB) dan angka kematian ibu (AKI) masih menjadi masalah utama di dunia karena masih terbilang tinggi. Data Organisasi Kesehatan Dunia (WHO) menyebutkan bahwa di dunia sekitar 800 ibu meninggal setiap hari karena komplikasi kehamilan dan persalinan. Kementerian Kesehatan telah mencetak dan mendistribusikan Buku KIA ke daerah-daerah sebesar 94% dari target jumlah ibu hamil, dan seluruh Puskesmas telah menerima Buku KIA, namun hanya 60,5% yang dapat menunjukkan buku KIA. Penelitian ini bertujuan untuk mengetahui hubungan antara pendidikan kesehatan dengan pengetahuan ibu hamil tentang buku KIA di desa Suka Makmur, kecamatan Deli Tua, Kabupaten Deli Serdang tahun 2021. Metode: Jenis penelitian ini adalah quasi experiment dengan desain one group pretest dan post test yaitu pretesting dilakukan terlebih dahulu sebelum diberikan intervensi kepada responden yang kemudian setelah diberikan intervensi kemudian dilakukan post test. Pengambilan sampel dilakukan dengan teknik total sampling, yaitu seluruh ibu hamil digunakan sebagai sampel penelitian dimana sampel dalam penelitian ini sebanyak 20 responden. Teknik pengumpulan data menggunakan lembar kuesioner. Teknik analisis bivariat menggunakan uji chi square. Hasil: dari hasil penelitian bahwa pengetahuan ibu hamil tentang buku KIA sebelum diberikan pendidikan kesehatan mayoritas dengan kategori cukup, yaitu 10 orang (100%) dengan pengetahuan ibu hamil tentang buku KIA setelah diberikan pendidikan Kesehatan berada pada kategori baik 7 orang (70,0%), cukup yaitu 3 orang (30,0%) dan kurang

ada. Berdasarkan hasil uji chi square dengan nilai signifikansi  $0,002 < 0,05$   
Kesimpulan: Bahwa terdapat hubungan antara pendidikan kesehatan dengan pengetahuan ibu hamil tentang buku KIA.

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## INTRODUCTION

The Maternal and Child Health Program (MCH) is one of the top priorities for health development in Indonesia. This program is responsible for health services for pregnant women, mothers giving birth, infants and newborns. One of the goals of this program is to reduce mortality and illness in mothers and children through improving the quality of services and maintaining continuity of maternal and perinatal health services at the level of basic services and primary referral services (Revinovita, 2019).

The Government of Indonesia has formulated several policies to reduce the Maternal Mortality Rate (MMR) and support the improvement of the health and survival of mothers and newborns. The government has also formed several policies regarding the implementation of maternal and child health services, one of which is by using the MCH book as a record of maternal and child services as well as health information materials for mothers and families (Oktarina, 2013).

The infant mortality rate (IMR) and maternal mortality rate (MMR) are still major problems in the world because they are still relatively high. Data from the World Health Organization (WHO) states that around 800 mothers die every day in the world due to complications of pregnancy and childbirth. The main causes of maternal death include bleeding, hypertension, infection, and other comorbidities suffered by the mother before pregnancy. The risk of maternal death in developing countries is 23 times greater than in developed countries with respect to pregnancy and childbirth (WHO, 2019)

Indonesia occupies the third position with the highest MMR in 2017 with 177 deaths per 100 thousand births. The worst results were in Myanmar with 250 deaths, then Laos with 185 deaths per 100,000 population. Meanwhile, neighboring Malaysia and Singapore, respectively, only 29 and 8 deaths per 100 thousand births. Of the 10 ASEAN countries, only half have exceeded the SDGs (Sustainable Development Goals) target of 2030; less than 70 per 100 thousand births. With an average decline of around 3 percent per year, Indonesia must work harder to approach this target (Ayu, 2020).

The Maternal and Child Health Book (MCH) contains important information needed by mothers and families that must be conveyed by health workers through information communication and education to increase knowledge and health behavior of pregnant women and their families so that mothers and families are able to maintain, monitor and improve maternal health pregnant women and the fetus as well as the mother and family to recognize danger signs as early as possible in pregnant women so that management can be carried out quickly. This can reduce the incidence of high-risk pregnant women and reduce maternal mortality (Ministry of Health, 2015).

The Ministry of Health has printed and distributed the MCH Handbook to the regions as much as 94% of the target number of pregnant women, and all Community Health Centers have received the MCH Handbook distributed by the District/City Health Office.

However, data from the national health survey (Sirkesnas) showed that 81.5% of pregnant women said they had a MCH handbook, but only 60.5% of them could show a MCH handbook. The results of data analysis from Riskesdas and Sirkesnas show that there is a link between ownership of the MCH Handbook and utilization of maternal and child health services. Mothers who have MCH handbooks carry out more frequent prenatal checks, have more deliveries with the help of health personnel and deliver more in health facilities than mothers who do not have MCH handbooks. Babies of mothers who have the MCH Handbook also receive more complete basic immunizations than babies from mothers who do not have the MCH Handbook, so it can be concluded that the MCH Handbook has a positive impact on changes in mother's behavior (Widyawati, 2019).

With the media of the MCH book as a tool in providing health information contained in it so that pregnant women can more easily understand and be willing to carry out the information in it including nutritional patterns that must be consumed daily to meet their needs during pregnancy until the lactation period, take iron tablets according to the rules to prevent anemia, carry out regular rest patterns, avoid strenuous activities, carry out patterns of maintaining daily hygiene and check with the dentist at least once to prevent infection, routine pregnancy checks to monitor the welfare of the pregnancy, avoid things that endanger the pregnancy and follow the advice of health workers to check the laboratory for early detection of risk. Carry out the information and interventions needed by pregnant women to be able to know the progress of their pregnancy conditions regularly and avoid risk pregnancies, the more active health workers provide information to pregnant women about health information and policies for implementing care according to standards can improve the health behavior of pregnant women because pregnant women will carry out what is known and what is suggested by health workers (Nur, 2017).2017).2017).

Optimization of the utilization of the MCH Handbook at the family level will only occur when health workers and cadres explain and ensure that mothers and families understand the contents of the MCH Handbook. Improving the understanding of this MCH Handbook can be done in various ways, when providing services, waiting time for services, as well as during activities in the community carried out by health workers, cadres or various parties who have a great interest in maternal and child health (Ministry of Health, 2015)

According to Notoatmodjo (2014), in a health education there are educational aids or often referred to as health promotion media. Called health promotion media because these tools are channels for conveying health information, tools or facilities that are easy to use and understand by extension workers and target objects are added value for the success or effectiveness of counseling. The use of aids or visual aids is intended to mobilize the senses. as much as possible on an object so as to facilitate understanding, see clearly the essence of the material presented, make it easier to digest the material, avoid boredom or boredom because respondents can see writing or pictures. Lack of knowledge of pregnant

women about the benefits and use and benefits of Maternal and Child Health (MCH) books,

In practice, the Maternal and Child Health (MCH) book has not been utilized by pregnant women as it should be, there are still many pregnant women and families who do not understand the use of open MCH so they do not apply the health information contained in the Maternal and Child Health book (Ministry of Health, 2015).

Mother's knowledge is important as a basis for changing behavior. because with good knowledge it will add to understanding and understanding of the contents of the MCH handbook. Mothers' low knowledge about using the MCH handbook is an obstacle in maternal and child health services, a wrong assumption about the MCH handbook being used only as a record book for pregnancy checks. So it is important to teach the contents of the MCH handbook by health workers to pregnant women and mothers of babies (Oktarina, 2013). Good knowledge of the MCH handbook will be able to increase compliance in the use of the MCH handbook, so that quality in the use of the MCH handbook will increase mothers who read and understand the information and messages in the MCH handbook which is an important matter for mother's knowledge in the MCH handbook (Sri, 2019)

Eka's research (2019) says that it is known that the majority of pregnant women's overall level of knowledge about the MCH handbook is sufficient as many as 23 respondents (76.7%), the overall level of knowledge about the MCH handbook is good as many as 7 respondents (23.3%), the level overall knowledge of the MCH handbook is lacking as much as 3 respondents (10%).

Meanwhile, Nita's research (2016) said that the knowledge of pregnant women about maternal and child health (MCH) books at BPS Sulasmi, SST Rajabasa Indah Bandar Lampung is in the sufficient category. This can be seen from the fact that there are still many pregnant women who do not know about the benefits of maternal and child health (MCH) books and the contents of maternal and child health (MCH) books. One of the reasons is that pregnant women have been given guidebooks in the form of maternal and child health (MCH) books but the awareness to take care of them, carry the MCH books and the awareness of wanting to read the MCH books and ask questions if there is something they do not understand is lacking.

Based on observations made by researchers in Suka Makmur Village, Deli Tua District, Deli Serdang Regency in March 2021, the number of pregnant women in March 2021 was 32 pregnant women. A brief interview with the village midwife in Suka Makmur Village said that all pregnant women received the MCH handbook, but pregnant women considered the MCH handbook only as a condition for having their pregnancy checked. Researchers conducted interviews with pregnant women about the contents of the MCH handbook, out of 10 pregnant women there were 4 pregnant women who could answer the questions given by the researchers and a total of 6 pregnant women could not answer questions. Out of 10 pregnant women, 2 pregnant women could not answer and 2 pregnant women who could answer regarding the contents of the MCH handbook, namely prenatal checks, danger signs, immunization schedule, choice of contraceptives. The researcher asked about the danger signs of pregnant women out of 10 pregnant women who did ANC (antenatal care). There were 3 pregnant women who could not answer and 1 pregnant woman who could answer, namely answering questions, namely answering feet, hands, swollen face accompanied by convulsions, vomiting continuously until do not want to eat, high fever. Finally, the researcher asked 10 pregnant women who were doing ANC

(antenatal care) about signs of labor. There was 1 pregnant woman who could not answer and 1 pregnant woman who could answer the question, namely continuous and prolonged stomach ulcers, amniotic fluid coming out, mucus mixed with blood. . The results of these interviews show that there are more pregnant women who do not know about the MCH handbook which has an impact on the health of mothers and children, namely fetal distress and death. The researcher asked about the danger signs of pregnant women out of 10 pregnant women who did ANC (antenatal care). There were 3 pregnant women who could not answer and 1 pregnant woman who could answer, namely answering questions, namely answering feet, hands, swollen face accompanied by convulsions, vomiting continuously until do not want to eat, high fever. Finally, the researcher asked 10 pregnant women who were doing ANC (antenatal care) about signs of labor. There was 1 pregnant woman who could not answer and 1 pregnant woman who could answer the question, namely continuous and prolonged stomach ulcers, amniotic fluid coming out, mucus mixed with blood. . The results of these interviews indicated that there were more pregnant women who did not know about the MCH handbook which had an impact on the health of mothers and children, namely fetal distress and death. The researcher asked about the danger signs of pregnant women out of 10 pregnant women who did ANC (antenatal care). There were 3 pregnant women who could not answer and 1 pregnant woman who could answer, namely answering questions, namely answering feet, hands, swollen face accompanied by convulsions, vomiting continuously until do not want to eat, high fever. Finally, the researcher asked 10 pregnant women who were doing ANC (antenatal care) about signs of labor. There was 1 pregnant woman who could not answer and 1 pregnant woman who could answer the question, namely continuous and prolonged stomach ulcers, amniotic fluid coming out, mucus mixed with blood. . The results of these interviews show that there are more pregnant women who do not know about the MCH handbook which has an impact on the health of mothers and children, namely fetal distress and death.

Based on this background, the author is interested in researching the relationship between health education and knowledge of pregnant women about MCH books in Suka Makmur Village, Deli Tua District, Deli Serdang Regency in 2021.

## METHOD

This type of research is a quasi-experimental research with one group pretest and post test design, namely the pretest is carried out first before the intervention is given to the respondents, then after being given the intervention, the post test is carried out. It is called a quasi-experimental with a one group pretest and post test design because this study aims to reveal a causal relationship by involving a predetermined group of subjects, the subject group is observed before the intervention is carried out, then observed again after the intervention (Nursalam, 2016). The research location will be carried out in Suka Makmur Village, Deli Tua District, Deli Serdang Regency. The time for the research was carried out starting from the preliminary study in March 2021 until the research was carried out.

Data analysis with 2 processes: 1) Univariate analysis, namely analysis that describes single variables both independent and dependent variables in the form of a frequency distribution. 2). Bivariate analysis, namely the

analysis carried out to determine the relationship between the independent variables and the dependent variable using the Chi-Square test at a 95% confidence level ( $p < 0.05$ ), namely to see the relationship/influence between the independent and dependent variables.

**RESULTS AND DISCUSSION**

1. Univariate analysis

The results of the study entitled the relationship between health education and knowledge of pregnant women about MCH books in Suka Makmur Village, Deli Tua District, Deli Serdang Regency in 2021 are as follows:

**Age**

**Table 4.1.**  
**Age Frequency Distribution of Pregnant Women**

No.	Age	Frequency	Percentage (%)
1.	< 20 years	2	10.0
2.	21-35 years	13	65.0
3.	> 36 years	5	25.0
<b>Amount</b>		<b>20</b>	<b>100.0</b>

Based on table 4.1. above that the majority of pregnant women are in the 21-35 year category, namely 13 people (65.0%) and a minority in the <20 year category, namely 2 people (10.0%).

**Education**

**Table 4.2.**  
**Distribution of the Education Frequency of Pregnant Women**

No.	Education	Frequency	Percentage (%)
1.	Base	6	30.0
2.	Intermediate	11	55.0
3.	Tall	3	15.0
<b>Amount</b>		<b>20</b>	<b>100.0</b>

Based on table 4.2. above that the majority of pregnant women's education is in the middle category, namely 11 people (55.0%) and a minority in the high category, namely 3 people (15.0%).

**Table 4.5.**  
**Frequency Distribution of Answers Knowledge of Pregnant Women About the MCH Handbook Before Health Education was Given**

No	Theory	Wrong		Right	
		f	%	f	%
1.	The MCH handbook cannot be used to monitor the growth and development of children and infants 5 years old	8	40.0	12	60.0
2.	The MCH handbook must be brought every time you do it visits to health services	7	35.0	13	65.0
3.	The MCH handbook is only used until a new baby born	7	35.0	13	65.0
4.	The MCH handbook is used for registration because it contains all the information and identities of the mother and family and records everything health of both mother and child	3	15.0	17	85.0
5.	The MCH handbook is used to obtain treatment information before referral and during referral care	4	20.0	16	80.0
6.	The MCH handbook cannot be used for mothers pregnant which do reference to get better service	5	25.0	15	75.0

**Profession**

**Table 4.3.**  
**Distribution of the Frequency of Employment of Pregnant Women**

No.	Profession	Frequency	Percentage (%)
1.	IRT	8	40.0
2.	Self-employed	9	45.0
3.	Private employees	2	10.0
4.	Government employees	1	5.0
<b>Amount</b>		<b>20</b>	<b>100.0</b>

Based on table 4.3. above that the majority of pregnant women are in the self-employed category, namely 9 people (45.0%) and a minority in the civil servant category, namely 1 person (5.0%).

**Knowledge of Pregnant Women About the MCH Handbook Before Being Given Health Education**

**Table 4.4.**  
**Frequency Distribution of Pregnant Women's Knowledge of the MCH Handbook Before Health Education was Given**

No.	Knowledge of Pregnant Women About the MCH Handbook Before Being Given Health Education	Frequency	Percentage (%)
1.	Well	7	35.0
2.	Enough	10	50.0
3.	Not enough	3	15.0
<b>Amount</b>		<b>20</b>	<b>100.0</b>

Based on table 4.4. above that the majority of pregnant women's knowledge of the MCH handbook before being given health education was in the sufficient category, namely 10 people (50.0%) and the minority in the less category, namely 3 people (15.0%).

**Answers to Knowledge of Pregnant Women About the MCH Handbook Before Health Education is Given**

Based on table 4.5. that the answers to the knowledge of pregnant women about the MCH handbook before being given health education, the majority answered incorrectly that the MCH handbook could not be used by mothers and their babies, namely 11 people (55.0%) and the majority answered correctly about the MCH handbook being used for registration because it contained all the information and mother and family identity as well as records of all maternal and child health matters, namely 17 people (85.0%).

7. With the KIA book, pregnant women can carry out examinations anywhere, starting from posyandu, poskesdes, pustu, puskesmas, private hospitals and clinics	7	35.0	13	65.0
8. Book MCH used only on moment Just check for pregnancy	5	25.0	15	75.0
9. The MCH handbook can be used in infancy carry out immunizations	8	40.0	12	60.0
10. The MCH handbook cannot be used at this time maternity mother	7	35.0	13	65.0
11. With book MCH, Mother pregnant could planning who will assist the birth	6	30.0	14	70.0
12. Pregnant women must have their pregnancy checked at least 2 times during pregnancy	4	20.0	16	80.0
13. The MCH handbook begins to be used when women are pregnant first time check her pregnancy	7	35.0	13	65.0
14. The MCH handbook is not mandatory for every mother pregnant	9	45.0	11	55.0
15. Pregnant women must buy a MCH book if they want use it	9	45.0	11	55.0
16. The MCH handbook cannot be used by mothers and the baby	11	55.0	9	45.0
17. Each pregnant woman gets 1 (one) book MCH	6	30.0	14	70.0
18. If the mother gave birth to twins, then the mother no additional KIA book required	9	45.0	11	55.0
19. The MCH handbook is only available at the Puskesmas	6	30.0	14	70.0
20. Mother pregnant could obtain information about pregnancy, labor, postpartum, infant care in the MCH handbook	10	50.0	10	50.0

### Knowledge of Pregnant Women About the MCH Handbook After Being Given Health Education

**Table 4.6.**  
Frequency Distribution of Knowledge of Pregnant Women About the MCH Handbook After Being Given Health Education

No.	Knowledge of Pregnant Women About MCH Handbook After Giving Health Education	Frequency	Percentage (%)
1.	Well	14	70.0
2.	Enough	4	20.0
3.	Not enough	2	10.0
	<b>Amount</b>	<b>20</b>	<b>100.0</b>

Based on table 4.6. above that the majority of pregnant women's knowledge of the MCH handbook after being given

health education was in the good category, namely 14 people (70.0%) and the minority were in the poor category, namely 2 people (10.0%).

Based on table 4.7. that the answers to the knowledge of pregnant women about the MCH handbook after being given health education, the majority answered incorrectly about the MCH handbook that must be brought with them every visit to a health service and pregnant women can obtain information about pregnancy, childbirth, postpartum, baby care in the MCH handbook, namely 7 people ( 35.0%) and the majority answered correctly about the MCH handbook being used for registration because it contains all information and identities of mothers and families as well as records of all maternal and child health matters, the MCH handbook cannot be used for pregnant women who make referrals to get better services namely 19 people (95.0%).

**Table 4.7.**  
Frequency Distribution of Responses to Pregnant Women's Knowledge of the MCH Handbook After Being Given Health Education

No	Theory	Wrong		Right	
		f	%	f	%
1.	The MCH handbook cannot be used to monitor the growth and development of children and infants 5 years old	6	30.0	14	70.0
2.	The MCH handbook must be brought every time you do it visits to health services	7	35.0	13	65.0
3.	The MCH handbook is only used until a new baby born	4	20.0	16	80.0
4.	The MCH handbook is used for registration because it contains all the information and identities of the mother and family and records everything health of both mother and child	1	5.0	19	95.0
5.	The MCH handbook is used to obtain treatment information before being referred and during referral care	3	15.0	17	85.0
6.	The MCH handbook cannot be used for pregnant women which do reference for get better service	1	5.0	19	95.0
7.	With the KIA book, pregnant women can carry out examinations anywhere, starting from posyandu, poskesdes, pustu, puskesmas, private hospitals and clinics	4	20.0	16	80.0
8.	Book MCH used only on moment Just check for pregnancy	3	15.0	17	85.0
9.	The MCH handbook can be used in infancy carry out immunizations	3	15.0	17	85.0
10.	The MCH handbook cannot be used at this time maternity mother	4	20.0	16	80.0
11.	With book MCH, Mother pregnant could planning who will assist the birth	3	15.0	17	85.0
12.	Pregnant women must have their pregnancy checked at least 2 times during pregnancy	3	15.0	17	85.0
13.	The MCH handbook began to be used when the mother pregnant first time check for pregnancy	3	15.0	17	85.0
14.	The MCH handbook is not mandatory for every mother pregnant	2	10.0	18	90.0
15.	Pregnant women must buy a MCH book if they want use it	6	30.0	14	70.0
16.	The MCH handbook cannot be used by mothers and the baby	5	25.0	15	75.0
17.	Each pregnant woman gets 1 (one) book MCH	3	15.0	17	85.0

18. If the mother gave birth to twins, then the mother no additional KIA book required	3	15.0	17	85.0
19. The MCH handbook is only available at the Puskesmas	4	20.0	16	80.0
20. Mother pregnant could obtain information about pregnancy, labor, postpartum, infant care in the MCH handbook	7	35.0	13	65.0

**Table 4.8.**  
**Distribution of Cross-tabulations on the Relationship between Health Education and Knowledge of Pregnant Women about the MCH Handbook**

	No Knowledge of pregnant women about the MCH handbook before being given health education	Knowledge of pregnant women about the MCH handbook after being given health education						Amount	p-value	
		Well		Enough		Not enough				
		f	%	f	%	f	%			
1	Well	7	100	0	0	0	0	7	100	0.002
2	Enough	7	70.0	3	30.0	0	0	10	100	
3	Not enough	0	0	1	33,3	2	66,7	3	100	
	<b>Amount</b>	<b>14</b>	<b>70.0</b>	<b>4</b>	<b>20.0</b>	<b>2</b>	<b>10.0</b>	<b>20</b>	<b>100</b>	

Based on table 4.8. above that the majority of pregnant women's knowledge about the MCH handbook before being given health education was in the sufficient category, namely 10 people (100%) with the knowledge of pregnant women about the MCH handbook after being given health education in the good category, namely 7 people (70.0%), sufficient, namely 3 people (30.0%) and lacking none while the knowledge of pregnant women about the MCH handbook before being given health education is in the poor category, namely 10 people (100%) with knowledge of pregnant women about the MCH handbook after being given health education in the good category does not exist, that is sufficient 1 person (33.3%) and less, namely 2 people (66.7%). Based on the results of the chi square test with a significance value of 0.002 <0.05, then Ho is rejected and Ha is accepted.

## CONCLUSIONS AND RECOMMENDATIONS

From the results of research on the relationship between health education and knowledge of pregnant women about MCH books in Suka Makmur Village, Deli Tua District, Deli Serdang Regency in 2021, it can be concluded as follows:

1. Most pregnant women's knowledge of the MCH handbook before being given health education was in the sufficient category, namely 10 people (50.0%) and the minority in the less category, namely three people (15.0%).
2. Most pregnant women's knowledge of the MCH handbook after being given health education was in a good category, namely 14 people (70.0%) and the minority in the poor category, namely 2 people (10.0%).
3. There is a relationship between health education and knowledge of pregnant women about MCH books in Suka Makmur Village, Deli Tua District, Deli Serdang Regency in 2021 with a significance value of 0.002 <0.05

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