



Maternal and child health book training on improving cadre skills in early detection of pregnancy risks

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ABSTRAK

Latar belakang: Buku kesehatan ibu dan anak (KIA) merupakan salah satu media pencatatan dan pelaporan kesehatan yang berisi informasi kesehatan ibu (hamil, bersalin dan nifas) dan kesehatan anak (pemantauan tumbuh kembang, imunisasi dan catatan kesehatan anak) serta berbagai informasi cara memelihara dan merawat kesehatan ibu dan anak. Dan kader kesehatan merupakan salah satu pemberi pelayanan kesehatan yang memiliki peran penting dalam pelayanan kesehatan ibu dan anak. Kader memiliki peran dalam promotif dan monitoring kesehatan ibu hamil untuk melakukan pemeriksaan kehamilan di fasilitas kesehatan. Khususnya di masa pandemic covid 19, diperlukan kesiapan fisik, mental dan sosial ibu hamil dalam menjalani masa kehamilan dan persalinannya. Sehingga pengetahuan dan keterampilan kader sangat dituntut untuk mampu memberikan pelayanan kesehatan tersebut, khususnya deteksi dini risiko kehamilan.

Tujuan : penelitian ini adalah untuk mengetahui pengaruh pelatihan buku KIA terhadap keterampilan kader pada upaya deteksi dini risiko kehamilan.

Metode : penelitian ini adalah penelitian observasional quasy eksperimental dengan metode two group pretest post test only design dengan jumlah sampel 60 kader. Adapun intervensi yang diberikan adalah pelatihan buku KIA dengan metode tatap muka pada kelompok intervensi I dan pelatihan buku kia dengan metode tatap muka serta pemberian video edukasi pada kelompok intervensi II. Penelitian dilakukan di wilayah kerja puskesmas Pembina dan Pakjo Kota Palembang. Analisis data menggunakan uji mc nmar dan uji chi square.

Hasil : penelitian diperoleh bahwa terdapat perbedaan keterampilan kader dalam melakukan deteksi dini risiko kehamilan pada kedua kelompok intervensi I ($p=0,012$) dan kelompok intervensi II ($p=0,000$) dan terdapat pengaruh pelatihan buku KIA terhadap keterampilan kader pada upaya deteksi dini risiko kehamilan ($p=0,002$; OR = .16,789).

Kesimpulan : dari penelitian ini adalah pelatihan buku KIA dengan metode tatap muka yang dikombinasikan dengan pemberian edukasi deteksi dini risiko kehamilan mampu meningkatkan keterampilan kader lebih baik dibanding dengan pemberian pelatihan buku KIA dengan metode tatap muka saja.

KATA KUNCI: buku kesehatan ibu dan anak; keterampilan, kader

ABSTRACT

Background: Maternal and child health book (MCH) is one of the media for recording and reporting health that contains information on maternal health (pregnancy, childbirth and postpartum) and child health (monitoring growth and development, background and child health records) as well as various information on how to maintain and care for the health of mothers and children. And health cadres are one of the health service providers

who have an important role in maternal and child health services. Cadres have a role in promoting and monitoring the health of pregnant women to carry out pregnancy checks in health facilities. Especially during the COVID-19 pandemic, it is necessary to be physically, mentally and socially prepared for pregnant women during pregnancy and childbirth. So that knowledge and skills are very important to be able to provide health services, early detection of pregnancy risks.

Objectives: of this study was to determine the effect of MCH book training on skills in early detection of pregnancy risk.

Methods: method is a quasi-experimental observational study with a two group pretest post test only design method with a total sample of 60 cadres. The interventions given were MCH book training with the face-to-face method in group I and MCH book training with the face-to-face method and presenting educational videos in the intervention group II. The research was conducted in the working area of Pembina and Pakjo Public Health Centers, Palembang City. Data analysis using mc nmar test and chi square test.

Results: of the study found that there were differences in the skills of cadres in conducting early detection of pregnancy risk in both intervention group I ($p=0.012$) and intervention group II ($p=0.000$) and that there was an effect of MCH book training on skills in early pregnancy detection efforts ($p=0.002$; OR = ,16,789).

Conclusions : of this study is that the MCH book training with the face-to-face method combined with the provision of early pregnancy risk education is able to improve the skills of cadres better than presenting MCH book training with the face-to-face method.

KEYWORD : maternal and child health book; skills; cadre

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INTRODUCTION

The success of maternal health programs can be assessed through the main indicators of the Maternal Mortality Rate (MMR). This indicator is also able to assess the degree of public health, because of its sensitivity to the improvement of health services, both in terms of accessibility and quality. It was recorded that in 2020 there was an increase in the number of maternal deaths in Indonesia to 4,627 deaths, from the previous year 2019 which amounted to 4,221 deaths. And the biggest cause of death was bleeding as many as 1,330 cases and hypertension in pregnancy as many as 1,110 cases (1).

Maternal mortality in Palembang City tends to increase, from 2019 as many as 20 deaths and increasing in 2020 to reach 59 maternal deaths. This reflects the lack of MCH program

performance and support both in terms of MCH program management and health recording and reporting systems (2).

One form of recording and reporting on maternal and child health is the MCH handbook. The MCH handbook contains information on maternal health (pregnancy, delivery and postpartum) and child health (monitoring growth and development, immunization and child health records) as well as various information on how to maintain and care for maternal and child health (3). The MCH handbook can describe the Continuum of Care or continuous care from pregnancy, childbirth, postpartum to children aged 6 years (4).

In Indonesia, MCH books are not used optimally, as evidenced by the low awareness of mothers to read the messages contained

in MCH books. Supported by Sistiaroni's research, mothers who have good knowledge of MCH Handbooks increase adherence to MCH Handbook use (5). Cadres have an effect on the utilization of the MCH book (OR: 6.63 p: 0.032) although there are roles that have not been carried out to the fullest, namely they have not made home visits, and are not sure whether the mother has carried out the messages in the MCH book (6).

The low pregnancy check-up visits for high-risk pregnant women and the undetected high-risk pregnancy are due to the lack of knowledge of cadres about the dangers of pregnancy, especially the signs of high-risk pregnant women. The low socio-economic status and low education and the geographical location of the community's house with health service facilities in the village allow pregnant women not to do prenatal check-ups (7).

Under normal circumstances, maternal and neonatal mortality in Indonesia is still a big challenge, especially during disasters. Currently, Indonesia is facing a non-natural COVID-19 national disaster so that maternal and neonatal health services are incompetent, a service that is affected both in terms of access and quality. It is feared that this will lead to an increase in maternal and newborn morbidity and mortality (8).

In this COVID-19 pandemic situation, there are many restrictions on almost all routine services including maternal and neonatal health services. For example, pregnant women are reluctant to go to the Puskesmas or other health care facilities. Therefore, to monitor the health of pregnant women and to find out early on there is a high risk for pregnant women, it is very desirable for an active role from health cadres, because health cadres have a very important role in the continuity of the pregnancy process until delivery for high risk pregnant women (9).

Cadres have an important role in health services, especially in maternal and child health

services. Health cadres have a role in monitoring and motivating pregnant women to carry out pregnancy checks at health facilities regularly (9). At the time of the current COVID-19 pandemic, physical, mental and social readiness for mothers is urgently needed in undergoing pregnancy and childbirth. Therefore, the role of cadres here is very helpful in the early screening of high-risk pregnant women. Therefore, knowledge and skills of cadres in carrying out early detection of pregnancy risks through the use of MCH handbooks are very necessary (10).

Based on the above background, the authors are interested in conducting research on the effect of MCH book training on the skills of cadres in early detection of pregnancy risks

MATERIALS AND METHODS

This type of research is a quasi-experimental observational study with a two group pretest post test design method. In the first stage, both groups were assessed for early pregnancy detection skills. The second stage, the first group was given treatment in the form of face-to-face training (intervention group I) and the second group was given face-to-face training treatment and education videos for early pregnancy detection via whatsapp group (intervention group II). The third stage is an assessment of the skills of cadres in carrying out early detection of pregnancy risk (11).

The sample size in this study was 60 samples consisting of 30 samples as the intervention group I and 30 samples as the intervention group II which were carried out by purposive sampling (11).

The sample in this study was health cadres in Palembang City Health Center. The inclusion criteria is cadres who have a minimum of senior high school education, have an android device and have experience as a cadre for at least 1 year. While the Exclusion criteria were cadres were not present during face-to-face training,

cadres were not able to operate android (google form), cadres did not fill out complete pretest and posttest questionnaires (11).

Data collection was carried out for two months in two working areas of the Palembang City Health Center. The data collection instrument in this study was an observation sheet.

Data collection was carried out for two months in two working areas of Palembang City Health Center. The data collection instrument in this study was an observation sheet. Data processing in this study includes the following steps editing, coding, entry, cleaning. To assess the effect of training between the intervention group I and intervention II using McNmar test and the Chi Square test (12).

RESULTS AND DISCUSSION

RESULTS

This research was conducted on 60 cadres in the working area of the Palembang City Health Center:

The results of statistical analysis showed that from 60 respondents it was found that the majority of respondents aged 46-64 years were 32 respondents (53.3%), the majority of respondents did not work as many as 51 respondents (85%) and the majority of respondents' education was high school as many as 42 respondents (70,0%).

Table 1. Characteristics of research respondents

Characteristics Respondents	Frequency	%
Respondent Age		
26-45	28	46,7
46-65	32	53,3
Profession		
Does not work	51	85,0
Work	9	15,0
Respondent's Education		
Senior High School	42	70,0
Diploma	11	18,3
Bachelor	7	11,7

The results of statistical analysis showed that the majority of respondents' skills before face-to-face intervention was incompetent as many as 20 respondents (66.7%). While the majority of respondents' skills after face-to-face intervention were competent as many as 19 respondents (63.3%) with $p < 0.001$ that is there was a difference in the skills of respondents before and after face-to-face training

The results of statistical analysis showed that the majority of respondents' skills before face-to-face and video interventions were incompetent as many as 27 respondents (90%). While the majority of respondents' knowledge after face-to-face and video interventions were competent as many as 29 respondents (96.7%) with $p < 0.001$ that is there was a difference in respondents' skills before and after face-to-face and video training

Table 2. Differences in respondents' skills in intervention Group I

		Posttest		Total	p
		Incompetent	Kompeten		
Pretest	Incompetent	10 (33,3)	10 (33,3)	20 (66,7)	0,012
	Competent	1 (3,3)	9 (30)	10 (33,3)	
Total		11 (36,7)	19 (63,3)	30 (100)	

*uji McNemar

Table 3. Differences in respondents' skills in intervention Group II

		Posttest		Total	p
		Incompetent	Competent		
Pretest	Incompetent	1 (3,3)	26 (86,7)	27 (90)	0,000
	Competent	0	3 (10)	3 (10)	
Total		1 (3,3)	29 (96,7)	30 (100)	

*uji McNemar

Table 4. Differences in skills between respondents in intervention Group I and intervention Group II

		Skills		p	OR
		Competent	Incompetent		
Intervention	Face to face	19 (63,3)	11 (36,7)	0,002	16,789
	Face to face + video education	29 (96,7)	1 (3,3)		
Total		48 (80)	12 (20)		

* Chi Square

DISCUSSION

The results of the statistical analysis of the chi square test related to differences in the skills of cadres showed that there were differences in the skills of respondents with face-to-face training interventions and respondents with face-to-face training interventions and video giving with p value = 0.002. and OR = 16,789 which means that respondents who received face-to-face training were 16,789 times more likely to have incompetent skills compared to respondents who received face-to-face and video training. And this educational video has been tested on 10 health cadres. in the working area of the health center.

The results of the study, after participating in the MCH book training, it was found that in the intervention group I, 30% of respondents experienced an increase in skills in carrying out early detection skills. Meanwhile, in the intervention group II, 76% of respondents experienced an increase in their skills in early detection of pregnancy risk.

Improving the skills of cadres skills is strongly influenced by training, with training it is hoped that knowledge will increase so that skills will also increase because skills as psychomotor are very important for changing one's behavior, this is in line with Sandi's research showing an increase in cadre skills after training for making PMT Modisco (13).

Every action is always preceded by a fairly complex process. As the starting point for receiving a stimulus, while in the individual there are various psychophysical dynamics such as needs, feelings, concerns, and decision making (14).

The purpose of this training can be more optimal with the use of incompetent media, only audiovisual media with video given to the cadres. With the video about early detection of pregnancy risk, the cadres are better able to remember and repeat the material they have received during face-to-face training. Especially in the era of digitalization, where many people are always side by side with their Android / gadgets. This will make it easier for cadres to access and study the material presented.

Basically, knowledge will continue to increase and vary according to the process of human experience experienced. According to Brunner, the knowledge process involves three aspects, namely the process of obtaining information, the transformation process, and the evaluation process. The new information obtained is a substitute for the knowledge that has been previously obtained or is a refinement of the previous information. The transformation process is the process of manipulating knowledge to fit new tasks. The evaluation process is carried out by re-examining whether the method of processing information is adequate. Knowledge is the result of remembering something, including recalling events that have been experienced either intentionally or unintentionally and this occurs after people make contact or observations of a particular object. Behavior that is based on knowledge will be more lasting than behavior that is not based on knowledge (15).

Behavior change is a theory which states that the process of behavior change is essentially the same as the learning process, which consists

of a stimulus (stimulus) given to an organism that can be accepted or rejected. If the stimulus is not accepted or rejected, it means that the stimulus is effective in influencing individual attention, and vice versa. If the stimulus has received the attention of the organism (received) then he understands this stimulus and proceeds to the next process. After that, the organism processes the stimulus so that there is a willingness to act for the stimulus it has received (behavior change) (16).

In this study, the increase in skills to perform early detection of pregnancy risk skills in cadres was seen after being given training, namely the increasing number of cadres who were able to perform early detection of pregnancy risk skills. The cadres have been able to classify the risks to pregnant women they meet in the community, determine the place for antenatal care services and determine the best place for delivery for the pregnant woman and educate pregnant women.

In this case, the behavior of cadres is a real skill in helping to utilize and use the MCH handbook properly and correctly and be able to detect high-risk pregnant women early. This behavior can basically be formed if the cadres have good knowledge and attitudes, so that they can help midwives or health workers in detecting early if pregnant women experience incompetence or are at risk of pregnancy. Teaching and learning process activities usually occur anywhere, through health training a person will learn from not knowing to knowing and with an educational approach will be able to spur the development of his potential (17).

The training materials for cadres are focused on knowledge about the danger signs of pregnancy, the minimum frequency of antenatal care, and how to detect as early as possible the risks and complications during pregnancy and delivery and educate pregnant women so that they are able to have a healthy pregnancy.

Based on previous research on training on making local MPASI, the average value of cadre

knowledge has increased, namely 97.74% or has good knowledge. This indicates that by holding training, it is not only increasing knowledge. But it will also increase one's skill in certain ways (18).

The level of knowledge of cadres on health, especially regarding early detection of pregnancy risk will affect the behavior patterns of cadres to be more active in participating and more responsive to any health incompetence that occurs in pregnancy (19).

Cadre skills by providing appropriate training procedures. So far, the cadres have received basic and refresher training on service activities at the posyandu using a conventional approach, namely training given through lectures and questions and answers by the trainer. Incompetence One weakness of the conventional method is that it only increases knowledge, but does not improve the skills of the trainees. The method used in the training must be in accordance with the incompetence, situation, and condition of the trainees, so that the skills of cadres in carrying out early pregnancy detection can be improved (20).

So far, the cadres have received basic and refresher training on service activities at the posyandu using a conventional approach, namely training given through lectures and questions and answers by the trainer. With the conventional method, the cadres will only increase their knowledge, but will not be able to improve the skills of the cadres as well. The methods used in the training must be in accordance with the situation and conditions of the participants, so that the skills of cadres in carrying out early detection can improve.

The process of behavior change needs to choose the right method. Methods to change knowledge can be used lecture methods, reading assignments, panels and counseling. Meanwhile, to change attitudes, brainstorming methods, group discussions, questions and answers and exhibitions can be used. The demonstration

training method is more appropriate for changing skills. Therefore, with this training which combines the lecture, discussion and demonstration methods, it is able to improve the three components of knowledge, attitudes and skills/skills of posyandu cadres.

The more often new knowledge is conveyed to someone, the easier it will be for that person to understand. Likewise with the provision of knowledge and skills in early detection of pregnancy to cadres. The repetition of the information they get, both with face-to-face training coupled with the provision of educational videos about early pregnancy detection, will increase the knowledge and skills of cadres (21,22)

Therefore, appropriate media and methods are needed to increase this ability to materialize. A person's ability will increase rapidly when someone receives the information conveyed using appropriate media such as audiovisual media in the form of video. Audiovisual media has been shown to have a positive impact compared to other media (23)

The improvement of cadre action skills is strongly influenced by training, with training it is expected that knowledge will increase so that skills will also increase because psychomotor skills are very important for changing a person's behavior. This is in line with research (13), showing an increase in cadre skills after training for making PMT Modisco .

The results of another study conducted in India also stated that audio-visual-based BFN training improved the knowledge, skills, confidence and performance of nurses in screening non-communicable diseases. This greatly helps the healthcare system in India in dealing with staff shortages and is a plus for them (24)

Every action is always preceded by a fairly complex process. As the starting point for

receiving a stimulus, while in the individual there are various psychophysical dynamics such as needs, feelings, concerns, and decision making (14).

Based on research (18), regarding training on making local MP ASI, the average value of cadre knowledge has increased, namely 97.74% or has good knowledge. This indicates that by holding training, it is not only increasing knowledge. But it will also increase one's skill in certain ways

The purpose of this training can be more optimal with the use of incompetent media, only audiovisual media with video given to cadres. With the video about early detection of pregnancy risk, the cadres are better able to remember and repeat the material they have received during face-to-face training. Especially in the era of digitalization, where many people are always side by side with their Android / gadgets. This will make it easier for cadres to access and study the material presented

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CONCLUSION AND RECOMMENDATION

Based on the results of the study, it can be concluded that there is an effect of MCH book training on the skills of cadres in an effort to detect early pregnancy risks. The results showed that face-to-face MCH book training and the provision of educational videos for early detection of pregnancy risk to cadres were able to improve cadres' skills better than face-to-face training.

REFERENCES

1. Kemenkes RI. Profil Kesehatan Indonesia 2020. Kementrian Kesehatan Republik Indonesia. 2021. 139 hal. Tersedia pada: <https://pusdatin.kemkes.go.id/resources/download/pusdatin/profil-kesehatan-indonesia/Profil-Kesehatan-Indonesia-Tahun-2020.pdf>
2. Dinkes Kota Palembang. Profil Kesehatan Kota Palembang Tahun 2020. Palembang. 2020. 23 hal.
3. Japan International Cooperation Agency (JICA). Annual Report 2017. Japan: JICA; 2017.
4. Dharmawan Y, Mawarni A, Handayani N, Pradana AR. Knowledge & Attitudes towards Family Use of Maternal Child Health Handbook. *Jurnal Kesehatan Masyarakat*. 2021;16(3):322–30. doi: 10.15294/kemas.v16i3.23768
5. Sistiarani C, Gamelia E, Sari DUP. Fungsi Pemanfaatan Buku KIA terhadap Pengetahuan Kesehatan Ibu dan Anak pada Ibu. *Kesmas Natl Public Heal Journal*. 2014;8(8):353. doi: 10.21109/kesmas.v8i8.404
6. Widagdo L, Husodo BT. Pemanfaatan Buku Kia Oleh Kader Posyandu: Studi Pada Kader Posyandu Di Wilayah Kerja Puskesmas Kedungadem Kabupaten Bojonegoro. *Makara, Kesehat*. 2009;13(1):39–47. Tersedia pada: <http://journal.ui.ac.id/index.php/health/article/viewArticle/348>
7. Listiyaningrum, Sugianto. Hubungan Pengetahuan Ibu Tentang Risiko Tinggi Kehamilan Dengan Kepatuhan Kunjungan Antenatal Care. *Yogyakarta: Jurnal Aisyiyah*; 2008. hal. 109–18.
8. Kemenkes. Pedoman Bagi Ibu Hamil, Bersalin, Nifas, Dan Bayi Baru Lahir. Direktorat Jenderal Kesehatan Masyarakat Kementerian Kesehatan RI. 2020.
9. Marmi. Asuhan Kebidanan pada Masa Antenatal. *Yogyakarta: Pustaka Pelajar*; 2011.
10. Susanti E. Resiko Tinggi Terhadap Pemeriksaan Kehamilan Selama Pandemi Covid-19. *Journal Nurse Updat*. 2020;11(3):68–75.
11. Dahlan S. Besar Sampel dan Cara Pengambilan Sampel dalam Penelitian Kedokteran dan Kesehatan. 3, editor. Jakarta: Salemba Medika; 2010.
12. Dahlan M. Statistik Untuk Kedokteran Kesehatan. Jakarta: Salemba Medika; 2013.
13. Sandi F, Aritonang E, Jumirah. Pengaruh Pelatihan Terhadap Keterampilan Kader Dalam Pembuatan PMT Modisco. *Gizi, Kesehatan Reproduksi dan Epidemiol*. 2012;1(2).
14. Sarwono, Sarlito. Pengantar Psikologi Umum. Jakarta: Rajawali; 2012.
15. Mubarak. Ilmu Kesehatan Masyarakat Konsep dan Aplikasi dalam Kebidanan. Jakarta: Salemba Medika; 2012.
16. Notoadmojo. Promosi Kesehatan Teori dan Aplikasi. Jakarta: Rineka Cipta; 2010.
17. Notoadmojo. Pendidikan dan Perilaku Kesehatan. Jakarta: EGC; 2014.
18. Sarbini D, Rahmawaty S. Pelatihan Pembuatan MP-Asi Lokal Dengan Bahan Dasar Bmc (Bahan Makanan Campuran) Untuk Balita Pada Kader Posyandu Di Wilayah Kerja Puskesmas Stabelan Surakarta. *Universitas Muhammadiyah Surakarta*. 2008;11(1).

19. Purwaningrum Y. Tingkat Pengetahuan Kader Tentang Deteksi Dini Resiko Tinggi Ibu Hamil Dengan Perilaku Melapor Pada Tenaga Kesehatan. *Jurnal Kesehatan*. 2019;6(3):105–9. doi: 10.25047/j-kes.v6i3.60
20. Sukiarko E. Pengaruh Pelatihan dengan Metode Belajar Berdasarkan kompeten dalam Kegiatan Kader Gizi Posyandu. *Jurnal Media Med Indonesia*. 2007;42(3):103–47.
21. Schrader PG, Lawless KA. The knowledge, attitudes, & behaviors approach how to evaluate performance and learning in complex environments. *Perform Improv*. 2004;43(9):8–15. doi: 10.1002/pfi.4140430905
22. Ajzen I, Joyce N, Sheikh S, Cote NG. Knowledge and the prediction of behavior: The role of information accuracy in the theory of planned behavior. *Basic Appl Soc Psych*. 2011;33(2):101–17.
23. Simamora RH, Saragih E. Penyuluhan kesehatan terhadap masyarakat: Perawatan penderita asam urat dengan media audiovisual. *JPPM (Jurnal Pendidik dan Pemberdaya Masyarakat)*. 2019;6(1):24–31. doi: 10.21831/jppm.v6i1.20719
24. Timmapur SM, Sahu B, Sathyanarayana T, Pai A. Audio-visual training intervention improves knowledge, skill, confidence, and performance of barefoot nurses for screening noncommunicable disease. *Journal Heal Sci Biomed Res KLEU*. 2020;13(2):100–4. doi: 10.4103/kleuhsj.kleuhsj