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Rural-Based Health Promotion Model for Pregnant Women in Banyumas District

Model Promosi Kesehatan Ibu Hamil Berbasis Pedesaan di Kabupaten Banyumas

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Abstract

Previous studies show that knowledge of prenatal care in rural areas remains low affecting on bad behavior, so developing health promotion models is needed to improve prenatal care knowledge, attitude and behavior. This study aimed to develop health promotion model of prenatal care in rural area based on needs assessment. Study was conducted on June 2015 by qualitative approach involving first 16 pregnant women in third trimester with risky pregnancy as key informants and 16 family members living with them and know their daily life, 27 midwives and 3 religious leaders as additional informants. Data collection techniques were in-depth interviews and observation for pregnant women and family, then focus group discussion for midwives and religious leaders. Analysis used was Miles and Huberman model by data reduction, data display and conclusion. Based on needs assessment, health promotion media is needed by book for pregnant women with attractive design that features images, colors and complete explanation. Book is selected because of pregnant women's preference and needs, characteristics of rural areas and infrastructure availability. Prenatal care materials need to be added from book containing child and maternal health including prenatal checkup by midwives, danger pregnancy signs, causes, consequences, prevention, recommended and unrecommended food, breast care ways, pregnancy exercise and fetal development.

Keywords: Health promotion models, prenatal care

Abstrak

Pengetahuan pelayanan prenatal di wilayah pedesaan masih rendah yang berdampak pada perilaku buruk sehingga mengembangkan model promosi kesehatan dibutuhkan untuk meningkatkan pengetahuan prenatal, sikap dan perilaku. Penelitian ini bertujuan mengembangkan model promosi kesehatan pelayanan prenatal di wilayah pedesaan berdasarkan penilaian kebutuhan. Penelitian dilakukan pada Juni 2015 dengan pendekatan kualitatif melibatkan 16 ibu hamil pertama di trimester ketiga dengan kehamilan berisiko sebagai informan kunci dan anggota keluarganya serta 27 bidan dan 3 tokoh agama sebagai informan tambahan. Teknik pengumpulan data adalah wawancara mendalam dan observasi untuk ibu hamil dan keluarga, kemudian focus group discussion untuk bidan dan tokoh agama. Analisis menggunakan model Miles dan Huberman dengan melakukan pengurangan data, tampilan data dan kesimpulan. Berdasarkan penilaian kebutuhan, media promosi kesehatan dibutuhkan melalui buku untuk ibu hamil dengan desain menarik berfitur gambar, warna dan penjelasan lengkap. Buku dipilih karena kecenderungan dan kebutuhan ibu hamil, karakteristik wilayah pedesaan dan ketersediaan infrastruktur. Buku yang memuat kesehatan ibu dan anak perlu menambahkan bahan pelayanan prenatal meliputi pemeriksaan prenatal oleh bidan, tanda kehamilan berbahaya, penyebab, konsekuensi, pencegahan, makanan rekomendasi dan tidak, cara menjaga payudara dan latihan kehamilan serta perkembangan janin.

Kata kunci: Model pelayanan kesehatan, pelayanan prenatal

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Introduction

Maternal mortality rate (MMR) in Indonesia increased based on results of Indonesia Demographic Health Survey (IDHS) from 228 per 100,000 live births in 2009 to 359 per 100,000 live births in 2012.[1] This is still far from target of the Millenium Development Goals (MDGs), which was 102 per 100,000 live births in 2015. If MMR is differentiated by maternal characteristics, it is higher in rural area.[2]

Data from Banyumas District Health Office (DHO) showed that in 2012, MMR was 116.81 per 100,000 live births.[3] In 2013, it increased to 126 per 100,000 live births occurred in rural areas namely Pekuncen, II Kembaran, and Banyumas Health Care with the highest number of cases amounted to three cases in which eclampsia and hemorrhage were the major causes of maternal mortality respectively 8.13% and 7.27%.[4]

Pregnant women in rural areas had low prenatal care behavior and lack of knowledge (51.9%).[5] Therefore, promotional efforts should be made to improve the knowledge, attitudes, and behaviors of mothers in prenatal care. The beginning stage is to identify the needs for the promotion according to expectations and the resources owned by the community. Characteristics of rural communities are mutual cooperation, geographic location difficult to reach, most basic education, low income, lack of information technology, the promotion done should be easy, interesting and innovative.[6]

Because of high MMR occurred in rural areas and their characteristics were different from urban communities, it is necessary to develop a health promotion model of prenatal care by focusing on the needs of rural communities. Therefore, this study was conducted in Banyumas District that included rural areas with high maternal mortality cases in order to find the right model of health care promotion in rural communities.

Method

This study was conducted on June 2015 using a qualitative approach. Technique of data collection was conducted through in-depth interviews to key informants namely 16 pregnant women and family who lived together with pregnant women and three religious leaders. The selected key informants were pregnant women in the first pregnancy who had entered third trimester with risky pregnancy. Data collection techniques to 27 midwives as additional informants were carried out by focus group discussion as well as observations on facilities and infrastructures owned by key informants. Locations of study were in II Kembaran and Banyumas Health Care. Instruments in this study were guide to in-depth interviews, focus group guide, and the observation sheet to observe the infrastructure owned by the informant at home. The data validity used a triangulation among pregnant women, families of pregnant women, midwives, and religious leaders. Analysis of data using Miles and Huberman model was to manually perform data reduction on the results of in-depth interviews from the field, by selecting the keywords of any statements made by informants. Keywords of each informant then presented in the forms of quotes, tables and charts to facilitate understanding of the researchers in collecting information. The next step was to draw conclusions based on valid evidence and the inconsistency of results of the data collection.

Results

Key informants in this study aged less than 25 years. Pregnant women were mostly graduated from junior high school. Risky pregnancies owned by pregnant women were chronic energy deficiency (CED), hemoglobin (Hb) below 12 g/dL (2 women), antepartum bleeding, anemia, and unwanted pregnancies at too young age. Last education adopted the main informants was elementary, junior high, or high school. The informants' jobs were mostly as housewives and employees. The last education of informants' families and religious leaders was elementary or high school by working as laborers, employees and housewives. Last education of midwives was the third degree of diploma (D3).

Based on Table 1, there were informants who disagree of taking a nap as a form of prenatal care because of myth they believed that nap, especially at the old age, would make childbirth come late. It was expressed in the following quotes:

"*No, [I am] afraid that childbirth would be late…*" (IM)

"*Yes, if [we are] having old pregnancy, [we] should make many moves, so the baby is strong and healthy. There are many [pregnant women] whose pregnancy is weak due to lack of move. Giving birth further will come soon, not be late…*" (KS, Family)

Based on in-depth interviews on key informant result showed in the Table 2, there were still key informants who had not done prenatal care, such as taking a nap, taking sexually transmitted disease tests, doing breast care and attending maternal classes.

Food taboos according to myth was the shrimp, catfish, *petai* (beans with pungent odor, widely eaten raw or cooked), *jengkol* (beans usually larger than *petai* of which also are eaten raw or cooked), anchovies, salted fish, eels, *so* leaf, crackers, ice, and heart vegetable. According to the midwife, the explanation was that these food contain high nutrition as done during classes and counseling of pregnant women, but they were not consuming because of the influence of parents.

"*During the pregnant women's class, we already told them that those (food) are okay to be consumed even (the*

Table 1. Overview of Key Informants' Pregnancy Care Knowledge

Pregnancy Care	Informants' Knowledge
Minimum knowledge of prenatal care	Minimum performed every month
	Minimum every month on the first and second trimester, twice a month during the third trimester
	Minimum every month on the first and second trimester, every week during the third trimester
Knowledge of tetanus toxoid immunization	Ever heard of, but do not know the type of immunization given and its benefits
	Knowing immunizing pregnant women namely TT immunization, but do not know the benefits
	Knowing immunization for pregnant women, namely TT and knowing its benefits which is to prevent tetanus
Knowledge of providing Fe tablets	Knowing benefits of consuming Fe tablets are:
	a. Having normal blood pressure,
	b. Having fresh body, and
	c. Preventing bleeding during childbirth
Knowledge of the daily care of pregnant women	Plenty of rest
	Morning walk
	Bath
Knowledge of maternal class	Knowing maternal class, but do not know the benefits
	Knowing the benefits of maternal class are:
	a. Having fresh body,
	b. Having strong pregnancy,
	c. Knowing the problems of pregnancy,
	d. Knowing how to do pregnancy exercise, and
	e. Knowing childbirth
Knowledge of breast care	Not knowing the treatment of breast
	Knowing breast care for breast hygiene and facilitate breastfeeding. The treatment methods are:
	a. Squeezing the nipple using baby oil or olive oil, and
	b. Rubbing the breast as usual
Knowledge of sexually transmitted disease tests	Never knowing that treatment
Knowledge of the food consumed by pregnant mothers	Nutritious food like vegetables and fruit for the growth of the fetus
	More nutritious food than ever before and eating more often, so that the fetus can develop well
	All food except the taboo food for pregnant women for good fetal development
	No changes in diet and told to consume meal to raise the weight so that the fetus is growing properly
Knowledge of the danger signs of pregnancy	Membranes rupture
	Bleeding
	Swollen feet
	No fetal movement
	High fever

food) have nutrition for pregnant women. Sometimes (they are) already counseled, but when at home, they obey their grandmothers like that." (Midwives SL)

Habits according to myth were hanging pins and nail clippers/folding scissors on the clothes, letting hair at sunset, furnace cleaning during late pregnancy, bathing her nephew every Friday *kliwon* (Javanese date), and should not take a nap, go out at night, sit in front of the door, or put something in her pocket.

According to informants, pregnant women who disagree of taking a nap believed it would make childbirth time come late.

"*No. [I am] afraid that childbirth would come late…*" (IM)

It was also supported by the midwife's statement, the myth of the pregnant women were not allowed to nap for too long by their parents as they were afraid that their babies might be fat.

"*If taking a rest, [the pregnant women] are sometimes not allowed to take a nap too long because afraid of kleme (the babies get much fat).*" (PI, midwife)

Traditions of *ngupati* and *mitoni*, according to the midwife, are Javanese traditions which do not affect the health of the mothers/fetus, but there are cases of pregnant women do not consume the medicine while sick because the money is saved for seven months tradition, at the end the babies passed away.

"*In the past, there was a case of mother with a virus or something, thus she should have checked up regularly to the doctor, but because of [her] seven months old [pregnancy], [she saved] her fund for mitoni, so she did not buy medicine for the virus, at the end her baby passed away. Therefore, the medicine should not be stopped.*" (Midwives PI)

Results of in-depth interviews were illustrated in the Figure 1. Based on Figure 1, the key informant resources in accessing information about prenatal care were personal and media resources. Personal source derived from formal personal resources namely midwives, and informal personal resources namely parents, husbands, brothers, neighbors and friends. While the media resources coming from the printed media were Maternal and Child Health book as accessible by all key informants and electronic media, namely television and the internet.

Factors inhibiting pregnant women in prenatal care were access to health services that far, weather, myths wrong and family support. Service centers, which are located not strategic or difficult to achieve by mothers preg-

Table 2. Overview of Key Informants' Pregnancy Care Behavior

Pregnancy Care	Informants' Behavior
Pregnancy examination	Examining every month
	Checks every month on the first and second trimester, every two weeks on third trimester
	Checks every month on the first and second trimester and every week on third trimester
	Double-checking at the age of 1 to 6 months and every month at the age of 7 to 9 months
Tetanus toxoid (TT) injection	Not yet injecting TT
	Already injecting TT
Fe tablet consumption	Consuming Fe, but not from the beginning of pregnancy and always completed
	Consuming from the beginning of pregnancy and always completed
	Consuming from the beginning of pregnancy and never be completed
Daily care	Always brush teeth every day and take a bath twice a day, morning walks and rest
	Always brush teeth twice a day, take a bath, and walk in the morning, but not taking a nap
Maternal class	Not attending maternal classes
	Attending maternal classes
Sexually transmitted disease tests	Never do the tests
Breast care	Not yet doing breast care
	Already doing breast care
Consumption of nutritious food	Consumption of vegetables, fruits and potluck dishes.
	Consumption of vegetables, fruits, and side dishes which are:
	a. Soybean cake
	b. Soybean curd
	c. Fish
	d. Chicken
	e. Sea food
	f. Chicken liver/beef

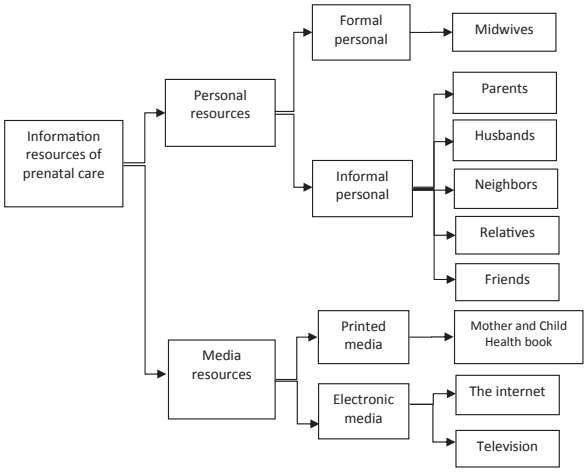

Figure 1. Resources of Pregnancy Care Information

nant women, leads to reduce access to health services thus inhibiting pregnant women in prenatal care.

Domination of parents about the myths surrounding food taboos expressed by key informants,

"*Not eating [the food]. Yes, because [I am] not allowed to eat, so I do not eat that [food]...*" (JD)

It was also supported by the midwife's statement,

"*Those who still believe in the myth [are influenced] by their parents, so what we provided is not implemented because they prefer to believe in their parents.*" (NM, midwife)

Moreover, it was due to the low level of family support during prenatal care visit.

"*Seldom, they only come if we call them to come.*" (SI, midwife)

Factors supporting the prenatal care of pregnant women came from the role of midwives and family. The attitude of health personnel (midwives) played an important role to improve the use of health services, so as to support pregnancy care including the urge for pregnant women to attend classes and to provide necessary health information for them.

It is supported by the following key informant's statement,

"*Indeed, pregnant women were asked to participate, so while checking up yesterday, they were told to come again and there was also the invitation for them.*" (NH)

According to midwives, information of pregnancy care was already provided during classes and examinations of pregnant women prenatal care.

"*During maternal class, then sure we also provide counseling during the prenatal care.*" (WD, midwife)

Based on results of in-depth interviews, all informants need promotion media about prenatal care in the forms of books, the internet, video, leaflets, or posters. Books with a vivid explanation should be illustrated and colored to attract.

"*Yes, [media] I like the most are those with pictures, colored. If I see the pictures are interesting, I will read them then.*" (RS)

"*Pictures are necessary, but an explanation of prenatal care is also important.*" (SW)

Video made the information clearly submitted to pregnant women by using many effects on audio and vi-

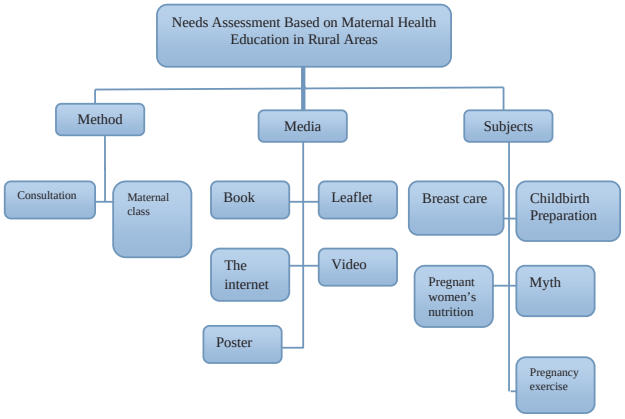

Figure 2. Needs Assessment Based on Maternal Health Education in Rural Areas

sual. It was expressed in the following quote,

"*Yes, I prefer VCD as it could have clearer pictures, so it is clear about this and that. You know there is not picture only, but there is also an explanation by voice, the picture is also not that passive... I mean it is moving.*" (NA)

According to the midwife, media that could be applied in Kembaran Region II and Banyumas was a book by economic considerations and existing facilities.

"*Printed media are, for example, books. If it is electronic media, not all of them are affordable. Just like those whose economy is low. The tape is no longer used nowadays, also not everybody has CD, so it could be book instead.*" (Midwives PI)

Counseling methods needed were consultation because any personal matter could be asked and quickly accepted, and information campaigns. According to the midwife, consultation was suitable, but some women were shy to ask when consulting, so the maternal class was considered more appropriate.

"*They are usually [passive] during consultation, but during maternal class they become more active because they have many friends.*" (Midwife PI)

Based on the results of in-depth interviews, pregnancy care materials required were about the prevention and management of danger signs of pregnancy, prenatal care standards and a balanced intake of nutritious food. Those materials needed by informants had not been discussed in details in the maternal and child health book.

Based on results of in-depth interviews, additional materials of prenatal care needed by pregnant women, which had not been discussed in the maternal and children health book, were information about breast care, childbirth, and the food intake of pregnant women who explained about the nutritional needs of pregnant women and the food that should be avoided for pregnant women including the described myths about food, information about fetal development in the womb each month, explanation of the causes and consequences of leg swelling as well as information about pregnancy exercise.

Discussion

Knowledge can be constituted by exposure of information.[7] This is in line with the results of study that ignorance of prenatal care was because it had not been exposed to the information. Knowledge can also be based on the local culture, this is in line with the results of study confirming that knowing or unknowing about prenatal care was a result of the habit of observing the environment.[8] Knowledge can be influenced by experience, it is in line with findings that danger signs of pregnancy mother experienced increased knowledge of pregnancy danger signs.[9]

Myths developed in the community also become an obstacle to prenatal care because of the myth as opposed to prenatal care that should be done. For example, pregnant women are prohibited to eat food, such as shrimp and catfish, while according to health the food actually have high nutritional content. Then pregnant women may not take a nap within the last trimester as needed to maintain the health and strength of the pregnancy, so they do not get fatigue due to whole day activities as it can endanger pregnancy (fetal/maternal).[10] In addition, behavioral treatments were also based on the family support and the role of midwives as educators.[11,12] Results showed that prenatal care had not been performed because of lack of family support for prenatal care. Tradition also mentioned dietary restrictions although the diets contained nutrients to pregnant women, such as shrimp and catfish.[13]

Another tradition is to avoid the supernatural because pregnant women have distinctive aroma, so they should use sharp objects, such as pins or scissors.[14] In addition, there is also four and seven monthly tradition as thanksgiving for the fetus when it was given the soul at the age of four months and given fetal forms perfectly at the age of seven months. *Ngupati* and *mitoni* ceremonies are to wishing for the fetus to grow healthy.[15]

Sources of information can be divided into two sources, namely recorded sources and personal sources.[16] Personal sources consist of informal (parents, husbands, siblings, neighbors, and friends) and formal (midwife) personal sources. Recorded sources were obtained from the printed (maternal and child health book) and electronic (the internet and television) media, but there were no neighbors as a source of informal personal information.[16]

A matter that can inhibit prenatal care is the affordability of health care. It affects the prenatal care visit.[6] Weather is also an obstacle, for example, a mother cannot come to prenatal classes because of the rain.

However, the role of family in prenatal care is very important. The family as the closest people to pregnant women should motivate the pregnant women to have prenatal care visit, but in fact, some of them do not perform their important task or even prohibit prenatal care because of the myths in society hindering the pregnant women to have prenatal care. Family support services will increase the use of prenatal care by the pregnant women.[17] Prenatal care is a very important determinant in providing information on prenatal care, maintaining the health of the fetus and mother, also encouraging pregnant women to give birth in health care to reduce maternal mortality. The family as a decision maker should perform pregnancy care.[18]

Books, leaflets and posters are favored because they can be read over and over again, the internet is accessible and easy to find all the information about prenatal care, then video (CD) is favored because it can be played repeatedly. After digging deeper, the informant said the media needed by them were interesting and packaged in forms of books and videos. Selection of media was then considered by looking at the characteristics of the Kembaran Region II and Banyumas.

Video packaged in a CD cannot be applied in the Kembaran Region II or Banyumas because of inadequate facilities. In order for the media to be well function, it is needed to have supported facilities, so the implementation of management functions run well.[19]

Book media is in accordance with the preparation of media considerations. Book media can be accepted by the public because it is kind of media favored and required by most key informants. In literacy criteria, according to the health profile of Kembaran Region II and Banyumas Health Center, fertile women in the region had a minimum education level of primary school, so on average, people could read. The third criterion is convenience that does not require complex equipment and electricity for visual media like book.[20] The fourth criterion is the feasibility as book is very likely to be implemented because the media prior to the handle of pregnant women is a maternal and child health book, and knowledge of pregnant women can be increased by the book. Therefore, book is such a media that can be implemented in Kembaran Region II and Banyumas.[21]

There was an improvement in term of knowledge of pregnant women after maternal class.[22] There was also a close relationship between the class of pregnant women and the ability to detect danger signs of pregnancy.[23]

The material needed to be added in the book was related to knowledge of informants who did not know some pregnancy care due to exposure of information that would increase someone's knowledge, so additional material as mentioned above was needed to be discussed in the media of pregnancy treatment.[24]

Conclusion

There are several key informants who do not know the benefits of some treatments, breast care, sexually transmitted disease screening tests and the danger signs of pregnancy. The attitude of pregnant women to prenatal care is supportive, but there remain pregnant women who do not support the prenatal care like taking a nap in the late pregnancy. There are still pregnant women who have prenatal care, such as tetanus toxoid immunization, breast care, Fe tablets consumption, maternal class and sexually transmitted disease tests.

Inhibiting factors of pregnant women in prenatal care is distance to health services, weather, myths and family support. Supporting factors for pregnant women to take prenatal care are the family support and midwife's role.

According to needs analysis of rural-based intervention for pregnant women, media needed by pregnant women is an interesting book with pictorial design, colors and complete explanation. Health promotion method that could be implemented well according to the needs of pregnant women in prenatal care is counseling, such as lecture and discussion during maternal class. The materials needed by pregnant women and have not been discussed completely in the maternal and child health book is a matter of prevention and response to danger signs of pregnancy, standard prenatal care, dietary advice and restrictions during pregnancy, breast care and pregnancy exercise, fetal development and myths of prenatal care.

Recommendation

Banyumas District Health Agency should create a media campaign that is pictorial and colored book with complete explanation of prenatal care, also regularly hold classes for pregnant women. Health Ministry should add materials concerning pregnancy care in the maternal and child health book.

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