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Analysis of the Needs of Midwives and Pregnant Women for Health Education Services for Pregnant Women to Prevent LBW

Analisis Kebutuhan Bidan dan Ibu Hamil Terhadap Layanan Edukasi Kesehatan Ibu Hamil guna Mencegah BBLR

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Abstract

Objective: This study aims to analyze the needs of midwives and pregnant women for pregnancy education services to prevent LBW (Low Birth Weight Babies).

Methods: This study used a combined approach between qualitative and quantitative approaches or commonly called the mixed method, which was conducted on 15 respondents consisting of midwives and pregnant women.

Results: This research found that midwives and pregnant women need a WhatsApp-based chatbot service that is useful, easy to use and inexpensive

Conclusion: Midwives and pregnant women need a whatsapp-based chatbot service that is useful, easy to use and inexpensive. This should be considered by stakeholders to be sensitive to the needs of pregnant women and midwives. The need for health literacy should indeed keep up with the times where access can be reached easily.

Keywords: Low Birth Weight, midwives and pregnant women needs, education services, health literacy.

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Introduction

The case of LBW (Low Birth Weight) today is still a global health issue and needs serious treatment[1]. The World Health Organization (WHO) states that LBW cases cause 60-80% of neonatal deaths. The risk of death in LBW babies also increases 20 times greater than babies with ideal weight[2]. Long-term impacts such as infections, congenital abnormalities, personality disorders, and disorders of growth and development and brain function are vulnerable to LBW babies until adulthood[3]. Based on data from the Ministry of Health , the highest cause of Infant Mortality Rate (IMR) in Indonesia is the case of LBW[4]. he Indonesian Demographic Health Survey (IDHS) detailed that in 2017 there had been 41 out of 48 neonatal deaths, 14 out of 20 postnatal deaths, and 55 out of 68 infant deaths caused by LBW[5]. Furthermore, based on statistical data, the distribution rate of LBW in Indonesia reached 7% and 6.2% in 2017-20186[6] [7]. Even though the distribution rate has decreased, LBW still needs to be taken seriously, considering the impact it can have.

An effort needs to be made by all interested parties. Efforts that can be made is to meet the need for information about LBW. Information like this is important news for pregnant women in order to anticipate the occurrence of low birth weight babies. Information about LBW is also crucial to socialize with midwives, who incidentally are one of the main people in handling pregnant women.

Literacy about LBW must continue to be disseminated among midwives and pregnant women. LBW is the incidence of newborns with a weight of fewer than 2500 grams[8]. LBW is a term for premature babies whose causes can be due to lack of gestational age (<37 weeks), low weight despite normal gestational age or a combination of both. Srimiyati and Ajul (2021) said that what has been proven to influence the incidence of LBW is the age of pregnant women at risk, gestational age, the mother's occupation, pregnancy complications, and the sex of the baby[9]. Literacy about LBW can also be known as health literacy. According to the American Medical Association (AMA), health literacy is a skill that includes the capacity to read basic and numerically and understand the environment of healthcare facilities such as understanding drug prescriptions, visit information, and other health materials.

There are two factors that influence the success of someone receiving health literacy, namely the factor of access to health information and the factor of a person's

level of education. Access to health information is the fulfilment of health information needed by individuals[10]. To determine health literacy, access to health information is very important. Sources of health information can be accessed by mothers through portals and applications on the internet and smartphones, print media such as magazines or books, or through seminars and discussion forums[11]. he role of access to health information is said to be necessary because of its function in approaching patients[12]. In In the health sector, education is interpreted as an effort to provide understanding to the public so that they have the desire to maintain, prevent, overcome, and improve the quality of health[13]. ased on this understanding, a person's level of mastery of health literacy is strongly influenced by his level of education[14].

The discussion above has explained the impact and importance of literacy about LBW for pregnant women. Besides that, midwives, as one the health workers on duty who help pregnant women, also need to be sensitive to LBW literacy. Identifying the needs of midwives and pregnant women for health education services for pregnant women to prevent LBW is urgently required. Through this study, researchers want to analyze and identify the needs of midwives and pregnant women for health education services to prevent LBW. Therefore, researchers are interested in examining the needs of midwives and pregnant women's needs for health education services to prevent LBW.

Methods

Research Design

This research uses a combined approach between qualitative and quantitative approaches or commonly called the mixed method. The mixed model used is the exploratory sequential mixed method, which is a combination of qualitative and quantitative techniques[15]. The reason is that this research, in its early stages, requires data about the literacy of pregnant women about LBW and services for pregnant women related to LBW prevention which must be obtained through exploration. Exploration results are then measured again with a specific sample. This remeasurement is a form of applying quantitative techniques which function as a complement to qualitative data.

The exploratory sequential mixed method begins first by exploring qualitative data through interviews with research subjects or documentation studies. The research subjects were people subjected to direct research; in this case, pregnant women and

midwives in the southern branch of Sleman district, which were used as research locations. In addition to the research subject, the term research informant is also known: to people outside the research subject who have information about the object under study. Criteria for informants to be selected in qualitative research must have sufficient information about the phenomenon to be studied. With these criteria, the phenomena that occur related to the object of research are easily understood by researchers.

Research Prosedure

The stages of data analysis follow the interactive analysis model from Miles and Huberman, which consists of the stages of data reduction, data presentation, and concluding. Interviews were conducted directly through face to face conducted by researchers. Researchers conducted interviews freely but armed with a list of questions so that the interview process remained focused. Interviews were conducted with midwives and pregnant women. The interview content that will be shown involves information directly involved with research, such as questions about LBW, LBW factors, respondents' understanding of LBW, and other questions involving LBW health services.

Results

Pregnant women's need for educational services

Pregnant women need educational services about LBW besides the health of pregnant women. Pregnant women who are healthy or pregnant women who feel healthy do not rule out the possibility of giving birth to LBW due to the mother's lack of attention to her pregnancy. The results of interviews with pregnant women about the causes of LBW show that pregnant women need these services. This need is reinforced by information from pregnant women regarding how pregnant women seek information about pregnancy health, as shown in Table 1.

Table 1. Access of Pregnant Women to Information About LBW

Information about LBW	Respondent Knowledge	Conclusion
How to get information so far	Got information from YouTube (P1), Not from	How to get information from

	midwives, only if there are complaints (P2)	YouTube, rarely from midwives.
Required information	About maternal and fetal health (P1, P2, P3, P4, P5)	The information sought is still general about the health of the mother and fetus
Information on Mother and Child Health (MCH)	Did not read MCH (P1), about maintaining pregnancy (P2, P3, P4), about maternal and child health (P3, P4, P5)	The information presented at MCH does not fully reach pregnant women.
Completeness of information in the MCH handbook	Did not read MCH (P1), complete (P2, P3, P4, P5)	Information on MCH is complete, but not all of it reaches pregnant women
Prevention of LBW, the dangers of LBW	No information (P2), unclear (P2, P3), incomplete (P4, P5, P6)	LBW prevention information is not specifically conveyed

Pregnant women get information from social media YouTube, information from midwives is only based on complaints, while the information presented in the MCH handbook is actually not read, and is considered incomplete. In fact, pregnant women need information about the health of the mother and fetus.

Midwives' need for educational services for pregnant women

Midwives, as health workers who serve pregnant women, have limited time to conduct education about LBW prevention. Midwives are more focused on handling complaints submitted by pregnant women who check with them.

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Table 2. Midwives' need for educational services for pregnant women

Information about LBW delivered	**Respondent Knowledge**	**Conclusion**
Prevention	Convey to pregnant women that: complete nutrition is fulfilled, pregnancies are not too close apart, gestational age is sufficient, avoid getting pregnant at too young an age, and routine complete pregnancy checks, and should not be exhausted (P11, P12, P13, P15)	Educational services containing information on how to prevent LBW
Information by midwives	We provide education within the framework of MCH (P11, P12, P13, P15) Education is important, find out what LBW is, what causes it, and how to prevent it (P11). we usually inform that it is already in the MCH handbook. So just open it (P12)	Oral information service when checking, the information submitted is also in the MCH handbook
Information on MCH	information on maternal and child health (P10, P11, P12, P13, P14, P15).	The core of the information is about maternal and child health
Completeness of information in the MCH handbook	Completeness of the information already exists at KIA. There is prevention, then the dangers of LBW too, are complete. (P12, P13, P14)	The information in the MCH handbook is complete. If you follow the MCH handbook, it

	means preventing LBW

From a material perspective, midwives' need for educational services is nothing new. All midwives who were research respondents stated that the information content in educational services, whether delivered directly to pregnant women or through MCH, was complete.

Table 3. The Quality of Educational Services Delivered by Midwives So Far

Education Quality	Description of Respondents	Conclusion
The strengths and weaknesses of the current service	It's easy to access because it's close, and the service time is also clear, but the drawback is that it's not all the time. Only during service hours. (P10, P11, P12, P13, P14, P15).	Educational services by midwives can only be carried out at certain hours at designated service points.
The weakness of information on MCH	As an educational service, the contents of MCH are complete (P10, P11, P12, P13, P14, P15). But it can't be interactive (P13, P14, P15).	Information from MCH is not interactive.

Educational services by midwives can only be carried out during service hours at designated service places such as health centres, clinics, or midwife practice places. Educational services contain educational aspects as contained in the MCH handbook. The MCH book is a source of information, but it is constrained by pregnant women less interested in reading the MCH book. Information from the MCH handbook is not interactive, so educational services reading the MCH handbook become less interesting.

Thus, there needs to be a more attractive educational service model as an alternative to the MCH handbook.

The results of interviews with midwives indicated a need for alternative educational service models that were more practical, and accessible anywhere, anytime. They did not have to be face-to-face between pregnant women and midwives. This interactive academic service can be realized with chatbot technology, namely conversations using robot technology.

Table 4. The Need for Alternative Educational Service Models

Quality of Educational Services	Description of Respondents	Conclusion
Educational services with machines (chatbots)	More convenient (P10, P11, P12, P13) Can be accessed anywhere (P10, P11, P12, P13, P14, P15). Easier, no need to meet (P13, P14, P15). Flexible (P12)	Compared to educational services through KIA, chatbots are more practical, easy to access, no face-to-face meetings are required
Easier	Very helpful and easy. So we can take advantage of the service easier and the speed of access and response is also flexible (P10, P11, P12, P13, P14, P15).	Education services are faster; responses are also quickly obtained, flexible and can be accessed anytime, anywhere.
Conversation on Whatsapp, pregnant women's questions can be understood	Immediately know the problems faced by pregnant women, what are pregnant women's complaints, there	Chatbots make educational services easier, faster, more

	will be answers immediately, we can provide answers immediately, pregnant women immediately know what to do (P10, Q11, Q12, Q13, Q14, P15).	flexible, and accessible anywhere. Midwives can find out pregnant women's problems more quickly. Pregnant women get solutive information faster.

Discussion

Health literacy plays an essential role during pregnancy because a mother's health behaviour affects her health and her child's health[16]. Pregnant women need to enrich themselves with health literacy which can be sought through various sources. Pregnant women get information from social media and YouTube; information from midwives is only based on complaints. In contrast, the information presented in the MCH handbook is not read and is considered incomplete. In fact, pregnant women need information about the health of the mother and fetus. The willingness of pregnant women to use educational media, which has been frequently used, indicates a condition in which pregnant women are less accepting or less interested in accessing information from more responsible sources (midwives). Most women use the internet to get information related to pregnancy[17].

Educational services contain educational aspects as contained in the MCH handbook. The MCH book is a source of information, but it is constrained by pregnant women less interested in reading the MCH book. Information from the MCH handbook is not interactive so educational services reading the MCH handbook become less interesting. Thus, there needs to be a more attractive educational service model as an alternative to the MCH handbook. Midwives show there is a need for an alternative educational service model that is more practical, can be accessed anywhere, anytime, and does not have to be face-to-face between pregnant women and midwives.

Conclusion

Based on the explanation above, midwives and pregnant women need a whatsapp-based chatbot service that is useful, easy to use and inexpensive. This should be considered by stakeholders to be sensitive to the needs of pregnant women and midwives. The need for health literacy should indeed keep up with the times where access can be reached easily.

On the other hand, the WhatsApp-based chatbot service model in increasing pregnant women's literacy to prevent Low Birth Weight Babies can be made by providing a simple and practical menu display which can be divided into three parts, namely register, information, and education so that later there can be direct interaction with the organizers of health facilities and with the help of chat interactions with robots so that the literacy of pregnant women towards health education services can increase.

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