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Utilization of Maternity Waiting Home (MWH) to Improve Access to Health Services: Systematic Literature Review



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Abstract

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Maternity waiting home (MWH) is a home built in the compound or near to health facilities that provides standard medical and emergency obstetric care services. MWH is considered to be a key strategy to “bridge the geographical gap” in obstetric care between rural areas with poor access to equipped facilities, and urban areas where the services are available. This study aimed to systematically review the utilization of MWH to improve access to health service. The method of finding articles in this study was in the period 2014 to 2018, free full text, human species, and scholarly journals which were then identified using an electronic database from Pubmed, Proquest and Onesearch. Three articles were carried out with thematic analysis to identify the main points. Factors associated with the utilization of MWH included (1) Distance; (2) Complication during pregnancy; and (3) Income. Barrier in the utilization of MWH were (1) Inadequate number of room and postpartum bed; (2) Lack of water and sanitation facilities; and (3) Unavailable electricity. Partnership between health workers in rural facilities, stronger role of stakeholders, and a broader health system, were expected to increase the utilization of MWH.

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INTRODUCTION

Improving maternal health is one of the top priorities of the *World Health Organization* (WHO). WHO works to contribute to reducing maternal mortality by increasing research evidence, providing evidence-based clinical and programmatic guidelines, setting global standards, and providing technical support to member countries. In addition, WHO advocates for more affordable and effective care, designs training materials and guidelines for health workers, supports countries to implement policies and programs and monitors progress (WHO, 2018).

Globally, for 25 years, maternal mortality has decreased by almost 44%. The ratio of maternal deaths in developing countries in 2015 was 239 per 100,000 live births compared to 12 per 100,000 live births in developed countries. The high number of maternal deaths in several regions of the world reflects inequity in access to health services which is related to the gap between rich and poor. Almost all maternal deaths (99%) occur in developing countries. More than half of these deaths occur in sub-Saharan Africa and nearly one third occur in South Asia (WHO, 2018).

Indonesia is a developing country that is still experiencing difficulties in reducing MMR (Maternal Mortality Rate). The 2015 Indonesian Demographic and Health Survey (IDHS) shows that MMR in Indonesia stands at 305 deaths per 100,000 live births. Efforts to accelerate the reduction of MMR can be done by ensuring that every mother is able to access quality health services, such as health services for pregnant women, delivery assistance by trained health workers in health care facilities, post-natal care for mothers and babies, special care and referrals if complications occur, the ease of getting maternity and maternity leave, and the last is family planning services (Ministry of Health, 2016).

Maternal and infant mortality are health problems that greatly affect the quality of community health status, which is an indicator of the success of national development which is the joint responsibility of the relevant sectors and the health department as the coordinator. That is because the quality of health services is a benchmark of performance in the development of the health sector which has indicators of meeting the Minimum Service Standard (SPM) targets in the health sector. The most common causes of maternal death in

obstetric complications are hypertension in pregnancy (32%), infection (31%), postpartum bleeding (20%), abortion (4%), and others (13%). The high maternal and infant mortality rates require commitment from various related parties, both at national and global levels. Commitment to reduce maternal and infant mortality rates globally is contained in the Sustainable Development Goals (SDGs) target, namely in 2030, the maternal mortality rate must be below 70 per 100,000 live births (Ministry of Health, 2016).

The *World Health Organization* (WHO) has recommended that every delivery should be accompanied by a skilled officer, that is someone trained to manage a normal pregnancy that is able to identify, manage and refer complications. WHO has recommended the Maternity waiting home (MWH) as an intervention to improve maternity care. Women who do not have access to skilled care because of the constraints posed by distance, they can benefit from living in a Maternity waiting home (MWH) and being closer to a facility that can manage emergency obstetric complications (Henry et al., 2017).

MWH are places that are near health facilities (hospitals, puskesmas or community health center, poskesdes or rura; health center) and are used as temporary shelter for pregnant women and their companions, while waiting for labor to arrive, or several days after delivery. According to Permenkes No. 82 of 2015, a MWH is an effort to bring closer access and prevent delays in handling of pregnant women, maternity, post-partum and newborn babies, especially in areas that have difficult access to health facilities (Ministry of Health, 2016).

The referral chain for MWH is in the form of health facilities, both government health facilities including supporting health centers, health centers, public hospitals, Polri / TNI hospitals and non-government / private health service facilities including posyandu, poskesdes, doctors / private practice midwives, private clinics and hospitals. Thus, coverage of deliveries in health service facilities targeted at the Ministry of Health's Strategic Plan for 2015-2019 in the Republic of Indonesia Ministry of Health (2015) by 85% is the target of the MWH program.

Utilization of MWH to improve access to health services can improve the quality of maternal and child health services. In addition this can also contribute to the reduction in Maternal Mortality

Rate (MMR) and Infant Mortality Rate (IMR). However in reality, MWH has not been used equally, both in Indonesia and abroad, especially for residents who live in remote areas with limited service access.

METHODS

Researcher screened 833 literature reviews from three databases (*Pubmed, Proquest, Onesearch*) for later review. All articles were selected using quantitative research methodology indexed by *Scopus* with Q1 standards where this research was carried out in developing countries. The population in this review are pregnant women who use Maternity waiting home (MWH) and pregnant women with complications to find out how pregnant women use MWH to improve access to health services.

Systematic Literature Review preparation was adjusted to the steps of Systematic Literature Review, namely, 1) Identification of problems, 2) Prioritizing problems and questions, 3) Creating Frameworks, 4) Literature searching, 5) Choosing articles, 6) Conducting *critical appraisal*, 7)

Extracting selected paper data, 8) Collecting data and making mapping to answer questions.

Problem Identification:

Utilization of Maternity waiting home (MWH) to improve access to health services can improve the quality of maternal and child health services which also contribute to reducing Maternal Mortality Rate (MMR) and Infant Mortality Rate (IMR). MWH have not been used evenly, both in Indonesia and abroad, especially for residents who live in remote areas with limited service access, so the identification of problems that will be used as material for review articles is: Birth Waiting MWH that has not been properly utilized to improve access to health services.

Priorities and questions of this *Systematic Literature Review* specifically want to know: How the MWH is used to improve access to health services?

The *framework* used was PICO (*Population, Intervention, Comparison, Outcome*)

Research questions: How the Maternity waiting home (MWH) is used to improve access to health services?

Table 1 Framework PICO

Element	Inclusion	Exclusion
<i>Population</i>	1. Pregnant mothers who utilize MWH 2. Pregnant mothers with complication	Pregnant mothers who live in the city
<i>Intervention</i>	Maternity waiting home (MWH)	
<i>Comparison</i>	Factors and Inhibitions of MWH	
<i>Outcome</i>	The Utilization of MWH	

Searching literature used in this study was obtained through a comprehensive search system (Comprehensive literature search). Searching was done by using the following steps: Creating a *framework* to determine the inclusion and exclusion criteria, determining keywords that match the *framework* that has been determined, searching using keywords into the *Pubmed* database, *Proquest* and *Onesearch*, conducting keyword searches carried out with filters to get results that are more focused in accordance with a

predetermined *framework*. The method of searching articles in this study were articles in the period 2014 to 2018, *free full text, human species*, and *scholarly journals* which are then identified using an electronic database from *Pubmed*, *Proquest* and *Onesearch*. The author used Boolean (OR and AND) as a conjunction to combine keywords in a search. Thus the results would be more focused and relevant in *PUBMED*. Keywords used:

Table 2 keyword

Search String	AND	AND
utilization	maternity waiting home	waiting
use	maternity waiting house	shelter
role	maternal home	hut
	maternal house	
	Maternal	
	childbirth	

Record the findings, and save them in the Zotero bibliography storage engine where the data that has been stored is then filtered according to the *framework* in which in this case inappropriate articles will be issued, record the findings of the number of articles and compile a flow diagram prism.

In the selection of articles using 3 databases and *reference lists*, the number of articles was 833.

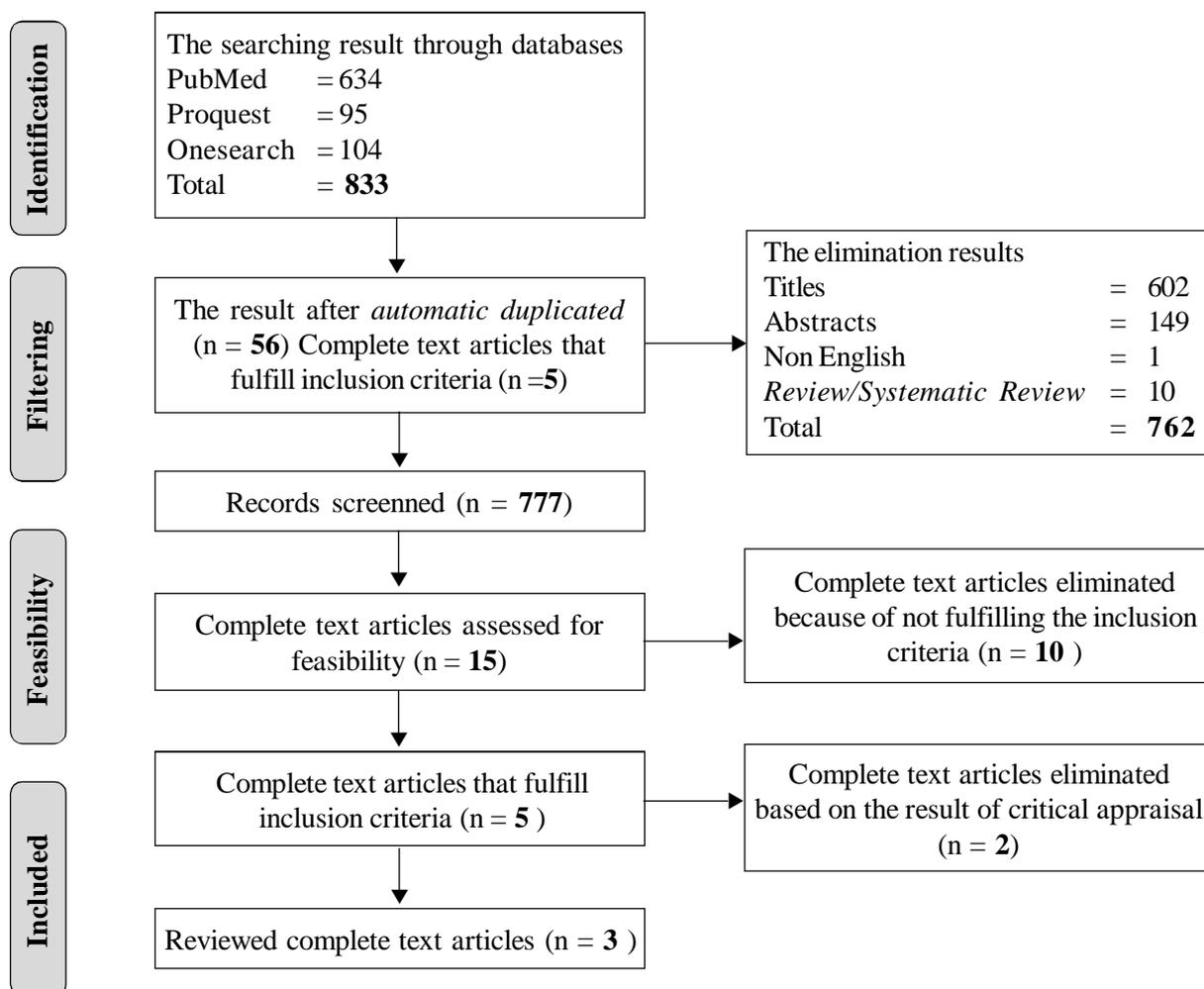


Figure 1 Search process flow chart

In a search of 3 databases and *reference lists*, it was found: *Pubmed* 634 journals, *Proquest* 95 journals and *Onesearch* 104 journals, so that the total articles found were 833. After duplicating, it turns out that there were 56 journals that made the total then 777 articles. After that, the results released from the title 602 journals, 149 abstract journals, not English 1 journals and review / systematic review of 10 journals, obtained 15 articles to be taken and reviewed independently based on inclusion and exclusion criteria. The next step taken was further filtering of the article to find appropriate and complete references regarding the use of the Maternity Waiting Home (MWH) and obtained 5 articles for *critical appraisal*. The writer filters these articles based on the results of *critical appraisal* where then obtained 3 quantitative study articles for final review.

Critical appraisal was used to assess the quality of the article to be used. The tool chosen to assess the quality of articles was Joana Briggs Institute (JBI). In the *critical appraisal* stage, *critical appraisal* was assessed on 5 articles. In addition, a journal assessment was also carried out to assess efficiently whether the literature could be used to answer clinical questions and be able to assess the research methodology used in a particular study, so that it could be decided whether the research results were acceptable or not. In this case, the writer made a *critical appraisal* using a checklist from JBI. In this process, the selected journals were 3 journals based on the writer's judgment which noted that the three journals were of good quality and in accordance with the topic.

Data Extraction:

Extraction was carried out on data from 3 articles to include key criteria, such as research locations, study populations, research objectives, methodologies, and significant findings or recommendations. The writer independently recorded the information and then compared the extracted data.

Mapping:

Data extracted from systematic literature review articles were organized into several themes. The themes included in the review of this article include:

1. Factors that influence pregnant women in utilizing a Maternity waiting home (MWH)

2. Obstacles and expectations of the use Maternity waiting home (MWH) today and in the future.

The results of a systematic search obtained articles published in 2014-2018 where the writer and data sources taken came from the country of Zambia (n = 2), Tanzania (n = 1). Three articles taken in this systematic literature review are Q1 quality journals. All articles use the cross-sectional study method. Two journals discuss the factors that influence the utilization of the Birth Waiting Room and one journal discusses the obstacles and expectations of the current and sustainable use of the Maternity waiting home (MWH).

RESULTS

1. Factors that influence pregnant women to use Maternity waiting home (MWH)

Research conducted by (Sialubanje et al., 2017) concerning personal and environmental factors related to the use of Birth Waiting Room in rural Zambia, the results show that there are significant differences between respondents who have access to MWH and those who do not have access to MWH. This relates to the place of delivery ($p = 0.001 < 0.05$), duration of stay at the health center before delivery ($p = 0.04 < 0.05$) and midwives ($p = 0.001 < 0.05$). Likewise, there is no significant relationship between the existence of a MWH and living in a MWH during a previous pregnancy. This finding provides insight into the factors associated with pregnant women utilizing a home waiting for birth, including the distance to a health facility and the history of pregnancy complications reported during ANC. Research conducted by (Fogliati et al., 2017): from MWH that are used to increase equity in rural delivery care have found that in the bivariate analysis, years of education, distance to the hospital and socio economic strata (SES), it is significantly related to living in a MWH. Women who have lived in MWH are more likely to be less educated (crude OR 0.53, 95% CI 0.34-0.82 for women with 8 years of education compared to 7 years), women whose place of residence is 6- 25 km, OR 4.74, 95% CI 3.01-7.46; 26-50km, OR 5.20, 95% CI, 3.10-8.74; > 50km, OR 5.58, 95% CI, 2.89-10.78). Socio-economic status, with poor women (quintiles 1-4) more likely to access the Birth Waiting Room than those from the highest quintile (OR 1.38.95% CI 1.02-1.88).

2. Obstacles and expectations for the use of the Maternity Waiting Home (MWH) for now and sustainably

Research conducted by (Chibuye et al., 2018) about the experiences and expectations of Maternity Waiting Home (MWH) in Luapula Province, Zambia: a mixed method of cross-sectional studies with women, community groups and stakeholders. The findings in this study are: Obstacles to MWH are the lack of adequate facilities, such as: inadequate rooms, equipment, electricity, water and sanitation facilities, do not guarantee women's safety and there is no provision of food or transportation. Expectations from the community for MWH include a partnership between health workers in rural health facilities, a broader health system and the role of stakeholders to continue to be involved and committed that Birth Waiting Room have an important role to reduce maternal and neonatal mortality rates.

DISCUSSION

1. Factors that influence pregnant women to use Maternity Waiting Home (MWH)

a. Distance

The presence of a MWH increases the utilization of services, especially for women who live far from health facilities (Sialubanje et al., 2017). Women who are > 50 km away from health facilities use more MWH because they will guarantee more survival for mothers and neonates, compared to women who have direct access to hospitals (Fogliati et al., 2017).

Research conducted in Indonesia, namely in South Central Timor Regency, distance is one of the factors why mothers do not use MWH. Mothers who live far from health facilities use MWH while mothers who live near health facilities do not use MWH (Bakoil, 2017). As we know that the MWH is a facility or place to make it easier for women who are going to give birth to health facilities, especially for mothers who live in rural areas. Through the MWH, this will greatly assist the mother in preparing for safe delivery for the mother and the baby to be born.

b. Complications during pregnancy

Mothers who are at risk of complications during pregnancy will make use of the MWH. Regardless of whether or not there is a MWH, some mothers

believe that they are personally at risk of developing pregnancy and childbirth complications. In this case complications during pregnancy are very dangerous for the mother and also the baby to be born. In this study, 80 mothers who experienced complications during pregnancy only 29 mothers who used the MWH while the remaining 51 mothers did not use the MWH (Sialubanje et al., 2017).

In this study, we can see that although the government has provided facilities to make it easier for women who experience complications during pregnancy to go to a health facility, the reality is that they are not utilized properly. The purpose of the MWH is to increase the coverage of deliveries assisted by health workers and carried out in health care facilities as well as to improve the detection and management of early maternal complications which in turn can play a role in accelerating the reduction of maternal mortality rate (MMR) (Ministry of Health, 2016).

c. Economic Status

Maternity Waiting Home (MWH) are only used by middle-lower income mothers, whereas mothers with upper-middle income do not use Birth Waiting Room even though they live far from health facilities and these mothers experience complications during pregnancy (Fogliati et al., 2017). In Zambia, the use of MWH is affected by the economic status where mothers do not use MWH due to lack of costs, so that all the needs of mothers while in MWH cannot be fulfilled. (Sialubanje et al., 2015).

Research in Indonesia, specifically in West Southeast Maluku Regency, shows that 18.7% of maternal women use MWH and the remaining 81.3% do not use MWH. One of the factors influencing women not to use MWH is economic status (Sukoco, 2015). Other research in Indonesia is research that analyzes factors related to the use of waiting homes by maternity mothers in Kupang Regency, East Nusa Tenggara Province. This study shows that 31.2% of women use a MWH and 67.9% of women do not use a MWH. Cost availability factors have the strongest influence on utilization of waiting homes in Kupang Regency, East Nusa Tenggara Province (Huru *et al.*, 2014).

2. Obstacles and expectations for the use of the Maternity Waiting Home (MWH) for now and sustainably

Obstacles to the use of MWH are inadequate number of rooms, inadequate number of postpartum beds, unsupported water and sanitation and unsecured electricity sources (Chibuye et al., 2018). Another obstacle that makes mothers not use MWH is the safety of mothers is not guaranteed, because midwives are not 24 hours in the MWH and also inadequate space. Adequate budget in developing MWH is one step in reducing Maternal and Infant Mortality.

Criteria for MWH (Ministry of Health, 2016) are as follows:

1. The location is close to the community health center that are capable of delivering childbirth or the Regional / Central General Hospital
2. Houses owned by residents or houses built by the village government
3. Having a bedroom, kitchen, bathroom, latrine, clean water and ventilation as well as a good lighting (electricity)

The expectation is that there will be a partnership between health workers in rural facilities, a broader health system, and the role of stakeholders to continue to commit that the MWH is a tool to assist in reducing maternal and neonatal mortality rates with complications. A MWH must provide security and privacy, food and transportation. The government must budget sufficient funds so that the MWH can be put to good use by pregnant women with complications.

CONCLUSION

Factors that affect the utilization of the Maternity Waiting Home (MWH) are the distance (distance of residence to health facilities), complications during pregnancy and economic status. Maternity Waiting Home (MWH) is a facility or place to make it easier for mothers who are going to give birth to health facilities, especially for mothers who live in rural areas. Through the MWH, this will greatly help the mother in preparing for safe delivery for the mother and the baby to be born. Obstacles and expectations in the use of Maternity Waiting Home (MWH) for now and sustainably are the number of rooms that are inadequate, the number of postpartum beds that are inadequate, water and sanitation that does not support and unsecured electricity sources. The hope is that there will be a partnership between health workers in rural facilities, a broader health system, and the role of stakeholders to continue to commit that the MWH

is a tool to assist in reducing maternal and neonatal mortality with complications. MWH must provide security and privacy, food and transportation. The government must budget sufficient funds so that the MWH can be put to good use by pregnant women with complications.

SUGGESTION

It is important to promote Maternity Waiting Home (MWH) so that mothers who experience complications during pregnancy can make use of them, so as to facilitate them in accessing health facilities. The Department of Health, Hospitals and Community Health Centers must collaborate in promoting Maternity Waiting Home (MWH) so as to reduce maternal and neonatal mortality rates. Maternity Waiting Home (MWH) is a new government program so that not many researchers have conducted research on MWH. Therefore, I strongly recommend that research on MWH is carried out to obtain more findings.

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