Evaluation of Health Workers' Role in Preventing the Incidence of Low Birth Weight Babies: A Qualitative Study Based on the Theory of Planned Behavior

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Abstract: Cases of Low Birth Weight (LBW) Babies are still the leading cause of neonatal death in Indonesia. Community health centers must conduct antenatal care examination services as program organizers and pregnant women as program participants. Evaluation viewed from the Theory of Planned Behavior (TPB) aspect of health workers needs to be carried out to determine the effectiveness of the LBW prevention program that is already running. This research aims to explore the role of health workers in preventing LBW incidents based on TPB aspects. This research uses a qualitative approach with a holistic single case study design. The sampling technique used purposive sampling of twelve health workers who served at the Maternal and Child Health Polyclinic and had a minimum length of service of 1 year. The instrument used was an interview guide prepared based on TPB aspects. Validity of research data using data and method triangulation, thematic analysis using the Colaizzi Model. The research results identified eleven themes, namely: 1) The role of health worker communicators, 2) The role of health worker facilitators, 3) The role of health worker counselors, 4) The role of health worker motivators, 5) The role of health centers in preventing LBW, 6) Constraints and obstacles to the LBW prevention program, 7) Budget development and allocation of funds for LBW prevention, 8) Performance of health workers, 9) Resources that support program implementation, 10) Schedule for implementing the LBW prevention program, 11) Cross-program collaboration. Officer performance includes officers' roles as communicators, counselors, facilitators, and motivators through TPB theory related to officers' attitudes, norms, and motivation in implementing the program. These three aspects are integrated to form behavior that supports the success of the LBW prevention program. There needs to be an ongoing evaluation of obstacles in implementing the program.

1 INTRODUCTION

Improving maternal health, child health, family planning, and reproductive health is still a priority in the National Medium-Term Development Plan in the health sector for 2020-2024 (Ministry of Health the Republic of Indonesia, 2020). One indicator is the decline in the percentage of infant mortality per 1000 live births. According to 2018 Riskesdas data, the neonatal mortality rate in Indonesia decreased from 49.1 per 1000 live births to 12.7% of deaths per 1000 live births (Riskesdas, 2018). The neonatal mortality rate is important, considering that the decline is quite slow compared to the infant and toddler mortality rates. Neonatal death is closely related to maternal death (BPS, 2020). Neonatal deaths are often caused by abnormalities in pregnancy, premature births, neonatal infections, and low birth weight babies

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(Perry *et al.,* 2010). The Sustainable Development Goals (SDGs) program targets a reduction in the prevalence of LBW cases by 30% during the period 2012 to 2030. However, based on current LBW cases, this target is still too low to be achieved in 2030 (WHO, 2019).

Low Birth Weight (LBW) babies are babies weighing less than 2500 grams at birth without considering gestation time (Noorbaya, 2019). LBW is one of the main causes of neonatal death. In addition, LBW cases are at risk of morbidity and mortality, growth and development problems such as cognitive and language development, stunting conditions, and chronic diseases as adults (Pristya et al., 2020; Hockenberry & Wilson, 2015; Kamilia, 2019). In 2020, it was reported that the main cause of neonatal death for babies aged 0-28 days in Indonesia was LBW cases at 35.2% (Ministry of Health the Republic of Indonesia, 2021). Cases of infant deaths due to LBW in 2021 have decreased to 34.2% (Ministry of Health of the Republic of Indonesia, 2022). However, the trend in the Infant Mortality Rate (IMR) due to LBW is still a major factor that needs important attention.

The highest LBW cases in D.I Yogyakarta Province during the 2015-2020 period were in Kulon Progo Regency, with a case percentage of 42.32% (DIY Health Service, 2021). Based on data from the Kulon Progo District Health Service, the incidence of LBW in the last five years, from 2017 to 2021, tends to remain above 300 cases per year (Kulon Progo District Health Service, 2021). Therefore, there is a need for research related to efforts to prevent LBW.

Promotive and preventive interventions that can support child survival aim to reduce IMR to 16 per 1000 live births in 2024 (BPS, 2020). Practical implications for reducing LBW in Indonesia are that the government must increase Antenatal Care (ANC) examination visits through health promotion programs and maintain ANC facilities and service quality (Safitri *et al*., 2022). There is a need for behavioral support to minimize the occurrence of LBW births during pregnancy and proper care for LBW (Pillitteri, 2003). Relevant research shows that there is a significant relationship between ANC and the incidence of LBW, so the role of health workers is needed to encourage more ANC attendance (Weyori *et al*., 2022; Uwimana *et al*., 2023).

These promotive and preventive efforts can be carried out by applying the concept of health behavior theory, namely the Theory of Planned Behavior. In this theory, behavior can be predicted using a social psychology approach to understand several determinants of health behavior, including maternal behavior during pregnancy, to prevent LBW and maternal behavior in providing LBW care BBLR (Aschenbrenner *et al.,* 2016). The behavior displayed by a person is influenced by the intention to behave, while the intention is determined by three factors, namely attitude toward behavior, subjective norms, and perceived behavioral control. Apart from that, a person's intentions are also influenced by individual, social, and knowledge factors (Ajzen, 2012; Conner & Sparks, 2015).

Pregnant women's intention to seek health information is a function of psychological variables. Attitude is the most important factor influencing the intention to seek health information, and intention has a positive and significant effect on health information-seeking behavior kesehatan (Shamlou *et al.,* 2022*)*. The three aspects in the TPB theory, namely attitudes, subjective norms, and behavioral control originating from internal factors of the mother, should be the most effective efforts and can be developed to optimize ANC service efforts to prevent LBW (Ajzen, 2005; Islam *et al.,* 2023).

One way of knowing the existence of health workers is based on their role. The officer's role is closely related to the program that has been implemented (Olaniran *et al.,* 2017). In general, the role of officers includes preventive and promotive services to provide good quality public health (Malcarney *et al.,* 2017). Thus, to investigate the role of health workers, it can be viewed from preventive and promotive service programs (WHO, 2018). Preventive services really determine the level of a particular case because they prevent it before the case occurs (Salkeld, 1998). One of the main crucial cases for a pregnant mother is the potential for giving birth to an LBW baby.

Prevention efforts can be carried out directly in LBW cases, namely pregnant women. Health services at the downstream level, such as sub-district health centers and sub-district level health centers, should be carried out optimally so that program targets can be achieved in accordance with the targets that have been set (Luthfia & Alkhajar, 2019; Mays *et al.*, 2004). Kulon Progo Regency has the highest number of LBW cases compared to other regencies in DI Yogyakarta Province (Kulon Progo District Health Service, 2021). In 2021, the Nanggulan Community Health Center, which covers six villages, found 34 LBW cases.

Based on the results of interviews conducted at the Nanggulan Community Health Center with the person in charge of the maternal child health clinic and four respondents from pregnant women, several problems were found, including a lack of knowledge

of pregnant women regarding the importance of preventing LBW during pregnancy, low awareness of pregnant women regarding preventing LBW, and low participation. Pregnant women to take part in programs held by the Community Health Center. In addition, pregnant women respondents stated that the role of health workers is very important, especially in supporting mothers' knowledge regarding nutritional needs during pregnancy. From the perspective of health workers, efforts to prevent LBW have been implemented in accordance with the program from the Community Health Center. However, health workers still need to implement aspects of TPB theory in promotive and preventive efforts to prevent LBW incidents.

2 METHODS

This research sought to explore the role of health workers in preventing the incidence of lbw at the kulon progo district health center. our research questions were as follows:

a. What is the role of health workers in efforts to prevent lbw incidents at the kulon progo district health center based on tpb aspects?
b. How can we evaluate the role of health workers in efforts to prevent lbw incidents at the kulon progo district health center based on aspects of performance, organizational factors, resources, budget development, fund allocation, programs and schedules, and cross-program and sectoral collaboration?

2.1 Participants

This type of research is qualitative research with a holistic single case case study research design (Notoatmodjo, 2012). We chose this approach because it seeks to describe human life and actions specifically in certain locations with a focus on one case, namely the role of health workers in preventing LBW. This research was conducted at the Nanggulan Community Health Center with twelve informants as participants. Purposive sampling was used to select participants. The inclusion criteria for this study were: (1) Health workers serving in maternal and child health polyclinics; (2) Health workers who are actively involved in LBW prevention service programs, and (3) Health workers with a minimum of 1 year of service.

2.2 Materials and Procedure

2.2.1 Materials

This research instrument uses two instruments to (1) explore the role performance of health workers based on TPB aspects in the form of a description of attitudes, beliefs about norms, a description of intentions and behaviour shown by health workers in the LBW prevention program; (2) evaluating the role of health workers in the form of aspects of organizational factors, resources, budget development, fund allocation, programs and schedules, and cross-program and sectoral collaboration. This interview guide was developed from Ajzen's theory of planned behaviour theory to explore the current role of health workers. This instrument consists of 10 questions.

Data collection in this research was carried out by conducting in-depth interviews using interview guides, voice recorders and field notes. The interview guide was used to ask participants questions. Field notes were used as a tool to record participants' non-verbal responses during interviews. A voice recorder was used as a tool to record participants during the interview phase of the research.

2.2.2 Procedure

Data collection was carried out from January 2023 to February 2023. The researcher explained the aims and procedures of the research to obtain approval for participation from participants who met the inclusion criteria. Each participant was interviewed at two meetings according to the time contract. The first interview was used to explore the role performance of health workers, and the second interview was conducted the following day to evaluate the role of health workers and triangulation. The triangulation techniques chosen are data triangulation and method triangulation. Data triangulation was carried out by conducting interviews with the person in charge of the maternal and child health polyclinic, while method triangulation was carried out by collecting field notes in the form of participants' non-verbal responses during interviews. The data obtained from the field was then confirmed by the person in charge of the relevant maternal and child health polyclinic regarding the mandatory LBW prevention program, program implementation indicators, and the role of health workers in implementing the LBW prevention program. In this way, more complete data will be obtained so that research data bias can be minimized.

The average length of interview for each participant was 45 to 60 minutes.

2.3 Data Analysis

Data analysis uses the Collaizi method approach. This method includes six sequential data analysis steps (Creswell & Poth, 2007), including: (1) I was bracketing by writing a reflective journal about the researcher's perceptions before and after the interview, (2) We are identifying important statements from the transcribed data, (3) I am grouping significant statements into meaningful groups, (4) I am compiling textual descriptions of experiences through the formulation of themes, (5) We are structuring structural descriptions of participants' experience statements, and (6) It is building and combining textual descriptions and structural descriptions so that they represent the overall essence of the participant's experience. This process is repeated for each participant until no new information is obtained (data saturation). The process of translating codes into final themes was carried out through discussions between the research team.

2.4 Ethical Consideration

This research was approved by the ethics committee of Alma Ata University with number (KE/AA/I/101015/EC/2023). Research participants were explained about the research objectives, data confidentiality, data published, and their right to withdraw from the research.

2.5 Rigor

The trustworthiness of qualitative data is assessed based on credibility, dependability, confirmability, transferability, and authenticity (Creswell & Poth, 2007). In this research, credibility was confirmed by member checking, triangulation, and reflective journal writing. Member checks and triangulation confirm reliability. Checking is carried out by checking the accuracy of the data that has been collected from participants while triangulating the data and methods. Confirmability was assessed using exploratory audit procedures—investigative audit by consulting the data transcript and analysis process with the research advisor. Transferability and authenticity are sought by collecting descriptions of interview transcripts and quoting participant statements that support the conclusion.

3 RESULTS AND DISCUSSION

3.1 Results

A total of 12 health workers were interviewed personally by researchers according to the agreed time contract. Participants completed all questionnaires regarding demographic information, and the sociodemographic characteristics of health workers are reported in Table 1.

Table 1. Participants characteristics

Code	Karakteristik				
	Age (years)	Gender	Education level	Profession	Length of work (years)
P1	40	Female	Diploma	Midwife	17
P2	43	Female	Diploma	Midwife	15
P3	46	Female	Bachelor	Health promoter	16
P4	40	Female	Diploma	Midwife	17
P5	29	Female	Diploma	Nurse	4
P6	30	Female	Bachelor	Nutritionist	4
P7	30	Male	Bachelor	Doctor	1
P8	54	Male	Bachelor	Nutritionist	30
P9	44	Female	Diploma	Midwife	24
P10	41	Female	Diploma	Nurse	13
P11	29	Female	Bachelor	Health promoter	5
P12	38	Female	Diploma	Nurse	10

Based on Table 1, the research participants were twelve health workers, the majority of whom were female and over 30 years old, ten people (83.33%). Most of the participants had an education level of at least d3 level, seven people (58.33%), most of the health workers were midwives, four people (33.33%), and most of the participants' experience in carrying out their duties was more than ten years - eight people (66.67%). Based on the results of the research data analysis, several themes were obtained according to the research objectives. There are eleven themes: four for the first research question and seven for the second research question. Table 2, shows the qualitative study findings.

Table 2. Qualitative study findings

Themes	Sub-Themes
Theme 1: The role of health worker communicators	Subtheme 1: Communicator's attitude Subtheme 2: Behavior that needs to be emphasized as a communicator Subtheme 3: Norms believed to be a communicator Subtheme 4: Controlling behavior as a communicator Subtheme 5: Lack of intention as a communicator
Theme 2: The facilitative role of health workers	Subtheme 1: Provision health education media Subtheme 2: The role of community health center program innovation Subtheme 3: Good facilitator attitude Subtheme 4: Behavioral norms as a facilitator Subtheme 5 Perceived control which is believed to be a facilitator Subtheme 6: Intention as a good facilitator
Theme 3: The role of health worker counselors	Subtheme 1: Provision counseling service media Subtheme 2: Preparing counseling materials Subtheme 3: The attitude when becoming a counselor Subtheme 4: The norms believed to be a counselor
Theme 4: The motivator role of health workers	Subtheme 1: Personal approach efforts Subtheme 2: Sense of empathy Subtheme 3: Share experiences with patients.
Theme 5: The role of community health centers in preventing LBW	Subtheme 1: The role of supervision Subtheme 2: Empowerment of health cadres Subtheme 3: The role of midwives in ensuring ownership and use of KIA books
Theme 6: Obstacles and barriers to LBW prevention programs	Subtheme 1: Obstacles and barriers from pregnant women Subtheme 2: Obstacles and barriers for health workers
Theme 7: Development of budgets and allocation of funds for LBW prevention	Subtheme 1: Special fund allocation Subtheme 2: PMT budget Subtheme 3: Regulation of the use of funds Subtheme 4: Budget sources Subtheme 5: Budget reporting
Theme 8: Performance of health workers	Subtheme 1: Profesi dan peran tenaga kesehatan yang terlibat Subtheme 2: Program monitoring dan evaluasi yang dilaksanakan
Theme 9: Resources that support program implementation	Subtheme 1: Readiness of human resources Subtheme 2: Facilities and infrastructure in program implementation
Theme 10: Schedule for implementing the LBW prevention program	Subtheme 1: class schedule for pregnant women, Subtheme 2: Integrated ANC schedule Subtheme 3: Schedule for administering blood supplement tablets Subtheme 4: Schedule of examinations for pregnant women
Theme 11: Cross-program collaboration	Subtheme 1: Program service areas Subtheme 2: Forms of cross-program collaboration activities

Theme 1: The role of health worker communicators

The first theme, based on the TPB aspect, describes the role of health workers as communicators. There are four subthemes within this theme based on the experiences shared by participants during their interviews. They said that to play the function of a communicator, a health workers must have: (1) A polite attitude, build a relationship of mutual trust,

and relaxed communication; (2) Behavior that needs to be emphasized is calmness and giving praise; (3) Norms that are believed to be in accordance with Puskesmas regulations and standard operating procedures; (4) Control behavior such as empathy, caring and being a good listener; and (5) intention as a communicator, namely lack of commitment to standard operating procedures (SOP) and preparation of complete educational materials. Several participants conveyed their experiences in the role of communicator as follows:

"What builds communication is that we have to build a relationship of trust, that is, we need to apply polite attitudes, a relationship of mutual trust and relaxed communication to patients." (P1)

"... when carrying out an examination, don't be in a hurry, we will provide the results of the examination and then we will essentially give appreciation if the family is there." (P3)

Theme 2: The facilitative role of health workers

The second theme was the role of health workers as facilitators; they conveyed: (1) Providing health education media such as food models, leaflets, *"Kesehatan Ibu dan Anak"* or KIA books, and flip sheets; (2) The role of innovation in public health center programs such as rescue groups for high-risk pregnant women, classes for pregnant women, giving blood supplement tablets to young women, and classes for prospective brides; (3) The attitude as a facilitator is full of enthusiasm and concern; (4) Behavioral norms as a facilitator, namely politeness and providing facts; (5) Perception of control which is believed to be a personal approach and blending into society; and (7) Intentions as a good facilitator, namely calling the heart, customer satisfaction and increasing the capacity of pregnant women. Some participant statements are as follows:

"... We also use food models. Sometimes mothers ask and I give examples of good vegetables like this, animal protein like this with a set of food models." (P6)

"Because there are people who are sad too, what if it's like this, Doc? We have to be able to calm down but also provide facts." (P7)

Theme 3: The role of health worker counsellors

The third theme, namely the role of health worker counselors, includes (1) Providing counseling service media such as WA group, Facebook Community Health Center, and Instagram Community Health Center; (2) Preparing counseling materials such as the health of pregnant women and children; (3) The attitude when becoming a counselor is to be open, use language that is easy to understand, and provide feedback; (4) The norms believed to be a counselor are a personal approach, implementing communication stages, and inviting you to sit relaxed.

"*… during counseling, we give theories first. "We use language that is easy to understand, although sometimes there are health terms that we have to explain to pregnant women." (P5)*

"There are actually no rules, but in communicating, we have pre-interaction, implementation, and evaluation stages." (P9).

Theme 4: The motivator role of health workers

The fourth theme formulated, namely the motivator role of health workers, includes efforts to take a personal approach and empathize and share experiences with patients. Participant statements are as follows:

"*The first time we meet a pregnant woman we have to build trust first. We build trust so that he will automatically say what the problem is." (P2)*

"In providing motivation, I usually try to make the patient believe that it is right or wrong. I share my experience and hope that patients will be motivated to do the same." (P11)

Theme 5: The role of community health centers in preventing LBW

In the second question regarding evaluating the role of health workers, seven themes were formulated, including (1) The role of Community Health Center in preventing LBW; (2) Obstacles and barriers to LBW prevention programs; (3) Development of budget and allocation of funds for LBW prevention; (4) Performance of health workers; (5) Resources that support program implementation; (6) Schedule for implementing the LBW prevention program; and (7) Cross-program collaboration. The fifth theme conveyed by participants was the role of Community Health Center as a single health service agency in preventing LBW incidents. Participants conveyed supervision activities for the LBW prevention program through (1) Empowering Health cadres and (2) The role of midwives in ensuring ownership and

use of KIA books. The participant's statements included:

"... so for monitoring we also involve cadres. So, for example, cadres ask every day whether their PMT has run out via WA communication." (P8)

"... during ANC, midwives must ensure that pregnant women have books. But sometimes it is not read, so health workers can ask whether pregnant women read MCH books at home." (P9)

Theme 6: Obstacles and barriers to LBW prevention programs

The sixth theme is obstacles and obstacles to the LBW prevention program, including (1) Obstacles and barriers from pregnant women, namely not being willing to be visited, busy factors, non-cooperative responses of pregnant women, and cultural beliefs; (2) Obstacles and barriers for health officers include unplanned schedules, poor communication between staff, workload of health officers, limited number of human resources, and differences in health worker performance targets. The participant statements are:

"... LBW prevention programs mean classes for pregnant women and most mothers work, so they don't go to those meetings." (P4)

"... which is an obstacle because of the environment in the village, so the traditional beliefs are still strongly believed. Then there is influence from grandmothers or in-laws because they will provide information that has been passed down from generation to generation." (P12)

Theme 7: Development of budgets and allocation of funds for LBW prevention

The seventh theme in this research is budget development and fund allocation in the LBW prevention program, with supporting sub-themes, namely (1) Special fund allocation, (2) PMT budget, (3) Regulation of the use of funds, (4) Budget sources; and (5) Budget reporting. Supporting statements are:

"Most of the budget sources come from BOK, while procurement of PMT biscuits comes from the center." (P8)

"Reporting on the allocation of allocated funds such as RPK, and every month there is a UKM meeting. For example, at the beginning of each year, what we want to do is then broken down every month; at the next UKM meeting, each program is communicated." (P9)

Theme 8: Performance of health workers

The eighth theme formulated was the performance of health workers in preventing LBW incidents. The sub-themes concluded were (1) The role of the health workers involved, namely the role of the midwife, the role of the nutritionist, the role of the health promoter, the role of the nurse, and the role of the doctor; and (2) Implementing monitoring and evaluation, namely monitoring by the coordinating midwife and monitoring from the Health Service. The participant statements are:

"*Midwives and nutritionists, sometimes together with health promoters. "But more often midwives have roles and duties in implementing preventive LBW services in the form of classes for prospective brides and grooms who educate about LBW risk factors and their impact on children." (P9)*

"Yesterday, there was supervision at the end of the year from the family health sector asking about the reasons for the high LBW. "It turns out that most mothers who give birth are LBW due to hypertension and other comorbidities." (P10)

Theme 9: Resources that support program implementation

The ninth theme regarding evaluation of the role of health workers is resources that support program implementation, which is supported by subthemes (1) Readiness of human resources (HR and competency improvement programs, (2) Facilities and infrastructure in program implementation, namely teaching aids, assessment sheets, scales, metline, and ultrasound equipment. The supporting participant statements are:

"*There is a real need for updated knowledge; science is increasingly developing, so we need occasional training or workshops or other activities to increase knowledge of whether there are better resolutions in preventing LBW." (P2)*

"Yes, it is very adequate, there are also anthropometric examinations and ultrasound examinations." (P9)

Theme 10: Schedule for implementing the LBW prevention program

The tenth theme that can be concluded from the participants' statements is the schedule for implementing the LBW prevention program, including activities for pregnant women's classes, integrated ANC, giving blood supplement tablets to young women, and examination of pregnant women. Some of the participant statements are:

"... clear preventive services, namely ANC twice a week on Wednesdays and Saturdays. This service provides five units of maternal and child health, dental health, nutritional counseling, laboratory checks, and general health services. LBW preventive services in this building are good. "For services outside the building, we don't really understand whether there is a regular schedule or not." (P7)

"...class activities for pregnant women 4 times a year." (P2)

Theme 11: Cross-program collaboration

The eleventh theme in this research is cross-program collaboration, which is supported by sub-themes: (1) Program service areas, namely public health efforts and individual health efforts; (2) Forms of cross-program collaboration activities, namely collaboration to update knowledge, discuss problem-solving, and network development. The supporting participant statements are:

"... actually UKP and UKM are mutually sustainable; if pregnant women check at the Community Health Center, the services are also the same from medical records, KIA, dental clinic, nutrition clinic, laboratory, pharmacy, and general clinic." (P7)

"This form of collaborative activity provides many benefits, we in one sub-district can get to know each other and the programs we deliver can also be understood." (P1)

3.2 Discussion

Based on the categories in the themes found, these categories can be used to answer research objectives related to LBW prevention in terms of the TPB aspect, namely attitudes, norms, perceived behavioral control, intentions and behavior of officers or facilitators, and in terms of performance, organizational factors, resources, development of budgets and fund allocations, programs and implementation schedules, as well as cross-program collaboration.

The communication aspect is an important part of life. Communication is the way we convey information to other people (Thomas, 2017). Health workers act as communicators who can convey informative messages to patients, the community, and other sectors. According to (Shields & Flin, 2013), health workers' communication skills are included in non-technical abilities, which are related to social and cognitive abilities. This communication ability is the basis for health workers in providing services.

Research conducted by (Yusriani, 2021), on health worker communication influencing the behavior of pregnant women in preventing hypertension states that effective health worker communication greatly influences how pregnant women respond to information about hypertension. The findings of this research show that the most common cause of LBW incidents in the Nanggulan Community Health Center area is pregnant women with high risk, one of which is hypertension. Therefore, it is hoped that health workers will be able to increase and maintain their role in providing good information to pregnant women to reduce the risk of LBW.

The findings of this research are that the material presented by officers in the LBW prevention program includes women's reproductive health, physical and psychological health, the purpose and prevention of LBW, the impact of LBW events, fetal growth and development, and nutrition and supplements that need to be consumed during pregnancy. This material is relevant to the LBW prevention efforts described previously. One of the causes of LBW is premature rupture of membranes, as mentioned in (Setiati & Rahayu, 2017; Wijaya & Darusalam, 2022), which stated that the majority of pregnant women interviewed did not understand reproductive health. Therefore, health workers need to be more active in providing educational materials to pregnant women, starting from pre-wedding preparations and continuing during the pregnancy process. Providing repeated education will certainly make mothers remember the health material better.

Apart from providing health services, health workers also play a facilitator role. The facilitator is tasked with helping a group of people understand the goal or health workers as a medium that facilitates the achievement of a goal (Malcarney, 2017). In this research, it was found that officers provided educational media in the form of food models, leaflets, KIA books, and flip sheets. This is used to make it easier to transfer information to pregnant

women. With the media, it is hoped that it will be easier for pregnant women to understand what is explained by health workers so that efforts to prevent LBW can be achieved by increasing the knowledge of pregnant women. This is in line with research conducted by (Buraini, 2023), that the effect of health education using leaflets on the knowledge of pregnant women and leaflet media is more effective in increasing the knowledge of pregnant women.

Health workers at the Nanggulan Community Health Center created the "*Kelambu Siti*" or rescue group for high-risk mothers. This innovation was carried out in an effort to prevent and monitor high-risk pregnant women. This innovation was carried out in collaboration with assigned cadres. Thus, the role of health workers in efforts to prevent LBW can be said to be responsive in an effort to support the success of the program. The need for innovation to reduce maternal mortality rates by monitoring high-risk pregnant women is in accordance with research conducted by (Surya *et al.,* 2022), which found a monitoring program that can be used by both cadres and health workers using an application to make monitoring at-risk pregnant women easier. This is done to reduce the deaths of pregnant women because monitoring can be carried out optimally and as early as possible. This innovation can also be implemented at the Nanggulan Community Health Center, considering that the LBW rate is still high in the area.

Apart from innovations for high-risk pregnant women, the implementation of classes for pregnant women, which are carried out as an effort to prevent LBW, is considered not very effective because not all pregnant women can take the class, and it has not been proven to reduce the incidence of LBW. This is supported by research conducted by (Agustiningsih & Muwakhidah, 2017; Yulisa & Imelda, 2018), which stated that there was no difference in cases of LBW between subjects who attended classes for pregnant women and those who did not take classes for pregnant women.

Anemia is one of the problems that occurs in young women. If a teenage girl becomes pregnant, she will not be able to provide nutrients for herself and the child she is carrying, so she is at risk of giving birth to LBW. Therefore, giving blood supplement tablets to young women is very necessary, as has been implemented at the Nanggulan Community Health Center. The administration of blood supplement tablets shows an increase in HB levels in young women. This is in line with research conducted by (Adfar et al., 2023; Mozaffari-Khosravi et al., 2010) who stated that giving Fe tablets had a significant effect on increasing Hb levels in anemic adolescent girls.

The behavioral norms and attitudes of officers when acting as facilitators must be taken into account. This is because the behavior of health workers can influence the behavior of pregnant women while they are facilitators. One of the behaviors is providing education to pregnant women about pregnancy, recommendations for taking blood supplement tablets, as well as the risks experienced by pregnant women during their pregnancy and the impact on the pregnant mother and her fetus (Terpstra *et al.,* 2011; Malcarney *el al.*, 2017). This is also confirmed by research conducted by (Lubis & Hastuty, 2018) which states that there is a significant relationship between the behavior of health workers in disseminating blood supplement tablets and the compliance of pregnant women with taking blood supplement tablets. It is known that if pregnant women lack iron, it will cause anemia, which can result in the risk of LBW.

The findings of this research are that there are still many pregnant women who do not know the benefits of taking blood supplement tablets given by officers. Health workers must explain this by first investigating the history of taking blood supplement tablets during pregnancy and then showing it with facts. If pregnant women do not take blood supplement tablets regularly, the risk of anemia will increase by showing laboratory results of low Hb levels. Then, the risks that pregnant women can experience if they experience anemia are explained. It is hoped that by providing these facts, pregnant women can change their behavior and become more obedient to taking blood supplement tablets.

A counselor is someone who has expertise in the field of counseling services. As health workers we are required to be able to provide counseling to both individuals and the community. In terms of efforts to prevent LBW, it is hoped that officers can provide counseling for pregnant women (Terpstra *et al.,* 2011; Malcarney *el al.*, 2017). A counselor must be able to explore all possible problems experienced by his client. We must pay attention to our professional attitude when becoming a counselor. These attitudes include responsibility, awareness of behavioral norms that must be maintained, skill in using a personal approach and broad insight with openness with the person being counselled (Kim *et al.,* 2016). A personal approach to pregnant women in providing counseling will increase pregnant women's compliance. This is in accordance with research by (Juwita*,* 2018) which states that there is a significant relationship between counseling and the level of

compliance of pregnant women with consuming blood supplement tablets.

Apart from counseling using a personal approach, counseling can also be done by utilizing developments in information technology. This can be done via WA group media, Facebook, and also Instagram. The current pandemic has forced health workers to think of other ways to provide counseling, not only face-to-face but also by utilizing media such as WA Group and other social media (Naslund *et al.,* 2019). This is in accordance with research conducted by (Habibah *et al.,* 2021).which states that counselors also use online counseling media through the WA Group application.

Apart from counseling media, something that must also be considered is counseling material. To increase the knowledge of pregnant women, it is necessary to provide counseling about their health. According to Astuti (2023), the difference in the level of knowledge of pregnant women who receive counseling and those who do not receive counseling has a significant relationship to the compliance of pregnant women in consuming blood supplement tablets. Therefore, we as counselors must not forget to continue to provide counseling to every pregnant mother to reduce the incidence of anemia and the risk of LBW births.

The motivational aspect is something that encourages mentality and drives human behavior. As health workers, we must be motivators for pregnant women that officers can provide counseling for pregnant women (Terpstra *et al.,* 2011; Malcarney *el al.*, 2017). This is so that we can encourage pregnant women to change their health behavior so that pregnant women can improve their health behavior to reduce the risk of complications during pregnancy for both the mother and the fetus she is carrying.

According to Ryan and Deci (2016) there are two basic forms of motivation, one of which is extrinsic motivation. Where motivation arises from outside a person and then encourages that person to foster a spirit of motivation in that person to change their attitudes and behavior. According to (Arisanti, 2021), pregnant women are included in a group of high-risk factors who are vulnerable to health problems or disorders, one of which is mental health. Therefore, as health workers, we must be able to take a personal approach and also empathize with pregnant women by becoming motivators who will assist during and after pregnancy. Apart from that, we can also share our experiences so that pregnant women can know that what they are experiencing can also be experienced by other people.

The role and involvement of health cadres are also very important in efforts to prevent LBW. One of them is monitoring pregnant women. This is done as a form of collaboration between health workers and cadres to reduce maternal mortality. This is in line with research conducted by (Susanto, 2017), which states that active *posyandu* cadres are agents of change. The role of *posyandu* cadres in suppressing MMR and IMR includes conducting data collection, health communicators, persuasive approaches, visitations, being a liaison, and carrying out supervision and evaluation. This was also discovered when researchers conducted research where health cadres actively participated in monitoring pregnant women in the Nanggulan area and joined a rescue group for high-risk pregnant women.

In this research, it was found that midwives played a role in the use of KIA books. Apart from that, the KIA book is a simple but effective tool as an information tool that health workers can use as an educational medium. This is in line with research conducted by (Pandora, 2018), which states that there is a relationship between book use and pregnant women's attitudes toward health. In this study, mothers' negative attitudes towards health were greater in mothers who did not read KIA books. From this, the use of KIA books educational media can change mothers' attitudes towards health.

The program to prevent LBW incidents at the Nanggulan Community Health Center has not been optimal. Obstacles and obstacles to the LBW prevention program come from pregnant women and also from health workers. The research findings include obstacles from pregnant women, namely not being willing to be visited, busy factors, the response of pregnant women, and also the culture that pregnant women still believe in. This can happen because pregnant women feel less satisfied with the services provided by health workers. Research conducted by (Murti *et al.,* 2018), stated that factors related to pregnant women's satisfaction were facilities and access to health facilities. Another obstacle for health workers is the workload of health workers. Health workers are burdened with multiple tasks, so they cannot carry out their performance optimally. This is in accordance with research conducted by (Hakman *et al.,* 2021), which states that there is an influence between workload and performance in caring for patients.

In implementing program activities, Community Health Centers usually receive funding from the central government through health operational assistance (called BOK). Unfortunately, in the list of activities in the BOK budget, there are no specific

activities for preventing LBW. To provide additional food for pregnant women with Chronic Energy Deficiency, community health centers usually do not budget themselves but instead receive additional food (called local PMT) in the form of biscuits for pregnant women from the central government. Meanwhile, local PMT funded by BOK is specifically for underweight toddlers. This is due to regulations from the center regarding the use of BOK funds with targets that have been determined by looking at the results of the previous year's program achievements in the budget desk. The budget is then used for activities that have been approved by the Ministry of Health, whose reporting will be monitored every month by the Health Service and the Ministry of Health (Naftalin *et al.,* 2020; Nuryana,2023).

In terms of PMT for pregnant women, the local government itself does not budget specifically, so PMT for pregnant women only comes from the Ministry of Health in the form of biscuits. This is in line with research conducted by (Laeliyah, 2017), which states that Community Health Centers lack the human resources and infrastructure to manage the KIA program, there are no operational funds available for preventive and promotive activities from the APBD, and they only rely on BOK funds.

The role of health workers in efforts to prevent LBW is apart from being a communicator, counselor, facilitator, and motivator. This role is carried out in accordance with the competence of each health worker. One of them is the role of midwives in providing counseling to pregnant women. When carrying out a pregnancy check at the Community Health Center, the examination is carried out by a midwife. During each examination, the midwife will provide counseling to pregnant women. This aims to increase the capacity, both knowledge and skills, of pregnant women. Skills in conducting counseling itself will influence the results of the counselling (Biro, 2011).

Research conducted by (Erlandia & Gemiharto, 2014) stated that all midwives carry out counseling, but not all midwives carry out counseling correctly. Therefore, it is also necessary to monitor and evaluate both the coordinating midwife and the health service to improve the quality of services that are already running. This was also expressed by Marita *et al,* (2021) in her research entitled Quality of Minimum Service Standards for Pregnant Women's Health, which stated that the output of health services for pregnant women has not met the target, so the quality of service standards for pregnant women needs to be improved.

Resources in efforts to prevent LBW incidents consist of human resources and infrastructure. The readiness of human resources in providing services to pregnant women must be considered. Good readiness when providing material, knowledge, and self-confidence. Apart from that, the competency of health workers must also comply with standards so that they can provide services in accordance with their respective professional competencies. Competency development is also needed to update old knowledge with new knowledge (Lestari, 2020). In research conducted by (Suhartina, 2020), there was a significant influence on patient satisfaction between competence, reliability, insight, empathy, and physical evidence. Apart from that, according to (Amir *et al.,* 2021), leadership at the Community Health Center has a very important role in improving performance and service quality. Obstacles to improving the performance of Community Health Center organizations include a lack of training and job guidance to improve the competency of health workers (Yolanda *et al.,* 2021).

Facilities and infrastructure such as scales, metline, and ultrasonography are supporting factors for LBW prevention program services. The infrastructure provided by health facilities is one of the factors that influences the health status of pregnant women. This is confirmed by research conducted by Susanti (2017), which states that midwife competence, community knowledge, and health facilities influence the health status of pregnant women.

Programs carried out by health workers to prevent LBW include pregnant women's classes, bride and groom classes *("kelas catin"),* and youth posyandu, as well as integrated ANC. Apart from that, there is a PMT program to provide additional nutrition by providing biscuits, blood supplement tablets, and folic acid. Programs run by health workers are carried out according to a predetermined schedule. However, some programs and implementation days do not match the predetermined schedule. Pregnancy classes are held four times a year, in classes 2 times a year, and ANC programs are held every week on Wednesdays and Saturdays. The class for pregnant women itself is carried out to increase the knowledge of pregnant women. This is in line with research conducted by Kaspirayanthi (2019), which states that mothers who take classes for pregnant women will have better knowledge and a positive attitude in recognizing the danger signs of pregnancy.

Implementing integrated ANC is an effort to prevent LBW by improving the health status of pregnant women. This is done by detecting from the

start the risks that may occur from the results of examinations during integrated ANC (Shulz & wirtz, 2020). This is in line with research conducted by Siwi *et al.* (2023) that the reason pregnant women must undergo an integrated examination is that pregnant women will detect risk factors so that they can be anticipated and treated early.

Cross-program collaboration includes collaboration between public health efforts (UKM) and also individual health efforts (UKP) at Community Health Centers. Health service facility that organizes first-level UKM and UKP by prioritizing promotive and preventive efforts (Sulaiman, 2021). Collaboration across LBW prevention programs includes maternal and child health, nutrition, health promotion, environmental health, and doctor programs. The benefit of this cross-program collaboration is that they complement each other's knowledge so that the knowledge gained by pregnant women is more comprehensive. The obstacle experienced in cross-program collaboration was conflicting schedules.

Research conducted by Mahirawati (2017), states that cross-program involvement is needed to reduce the prevalence of chronic lack of energy. This is in accordance with the facts found in the field by researchers that services for pregnant women must involve cross-programs to provide maximum services from several sciences that will complement each other. Apart from that, according to (Chabibah & Khanifah, 2019), one form of cross-sectoral collaboration in the education and health sectors is to become a facilitator who is expected to encourage agents of change in society, especially in reducing maternal mortality.

4 CONCLUSIONS

The conclusions of this research include the following:

a. Health workers responsible for the LBW prevention program at the Kulon Progo district health center include doctors, nutritionists, nurses, midwives, and health promotion. Health workers have a minimum education of diploma with a minimum length of service of 1 year and a maximum of 30 years.
b. The performance of health workers includes the role of officers as communicators, counselors, facilitators, and motivators through TPB theory related to attitudes, subjective norms, and motives of health workers in implementing LBW prevention programs. These three aspects are integrated to form behavior that will support the implementation and success of the LBW prevention program.
c. The completeness of facilities, implementation of supervision, and evaluation determines the performance of officers in implementing LBW prevention program. Organizations that do not support the needs of health workers will experience obstacles and hinder performance.
d. Human resources supporting the success of LBW prevention programs are determined by HR readiness, HR competency, and competency improvement programs.
e. Budget development and allocation of funds that are not focused on LBW prevention programs will hinder the success of the program. The program and schedule for implementing the LBW program should be focused so that the program objectives can be achieved.
f. Cross-program and sectoral collaboration needs to be improved, especially regarding schedule management and collaboration skills of health workers.

This research recommends evaluating the obstacles to implementing LBW prevention programs and focusing on management and administration. LBW prevention program to ensure work team assignment letters.

REFERENCES

Adfar, T. D., Yanti, R., & Salsabila, C. L. 2023. The Effect intake of Fe tablets and Food Supplementation Biscuit on Changes of Hemoglobin level and LILA of Pregnant Women Who Have Chronic Energy Deficiency in Puskesmas Pauh Padang. *Darussalam Nutrition Journal,* 7(1), 18-24.

Agustiningsih, N., & Muwakhidah, S. K. M. 2018. Effectiveness of the Pregnant Mother Class Learning Program on Nutrition Knowledge, Anemia Status, Chronic Lack of Energy, and Low Birth Weight in Grogol District, Sukoharjo Regency (*Doctoral dissertation, Universitas Muhammadiyah Surakarta*).

Ajzen, I. 1991. *The Theory of Planned Behavior*. Organizational Behavior and Human Decision Processes, 50(2), 179-211.

Ajzen I. 2005. *EBook: Attitudes, Personality, and Behaviour.* McGraw-Hill Education (UK): Open University Press.

Amir, A., Lesmana, O., Noerjoedianto, D., & Subandi, A. 2021. The Role of Leadership in Community Health Centers on Organizational Performance and Quality of Health Services. *Journal of Telenursing* (JOTING), 3(2), 526-537.

Arisanti, A. Z. 2021. Psychological Impact of Pregnant Women During the COVID-19 Pandemic (Literature Review). *Sehat Masada,* 15(2), 241-250.

Aschenbrenner, A. P., Hanson, L., Johnson, T. S., & Kelber, S. T. 2016. Nurses' Own Birth Experiences Influence Labor Support Attitudes and Behaviors. *Journal of Obstetric, Gynecologic & Neonatal Nursing,* 45(4), 491-501.

Astuti, R. 2023. The Effect of Providing Counseling Using Video and Booklet Media on Increasing Knowledge of Fe Tablet Consumption in Anemic Pregnant Women. *Journal of Health and Development,* 13(26), 137-147.

Biro, M. A. 2011. What has Public Health Got To Do With Midwifery? Midwives' Role in Securing Better Health Outcomes for Mothers and Babies. *Women and Birth,* 24(1), 17-23.

Buraini, B. 2023. The Effect of Health Education Through Leaflet Media on Pregnant Women's Knowledge of Stunting in the Work Area of the Kotu Health Center, Anggeraja District, Enrekang Regency, South Sulawesi Province in 2023 (*Doctoral dissertation, Universitas Hasanuddin).*

BPS. 2020. *Profil Kesehatan Ibu dan Anak 2020*. Direktorat Statistik Kesejahteraan Rakyat.

Chabibah, N., & Khanifah, M. 2019. Sustainable Pregnant Women's Health Services. *GEMASSIKA: Journal of Community Service,* 3(1), 69-82.

Conner M & Sparks P. 2015. *Theory of Planned Behaviour and The Reasoned Action Approach. Predicting and Changing Health Behaviour: Research and Practice With Social Cognition Models. Third Edition.* England: Open University Press.

Creswell, J. W., & Poth, C. N. 2007. *Qualitative Inquiry and Research Method: Choosing Among Five Approaches*. United States: Sage Publications.

DIY Health Service. 2021. *Yogyakarta Special Region Health Profile 2020.* Yogyakarta: DIY Provincial Health Service.

Erlandia, D. R., & Gemiharto, I. 2014. Evaluation of the Village Midwife Communication Model as the Spearhead of Efforts to Reduce Maternal Mortality Rates in Sukabumi Regency, West Java Province. *Journal of Communication Studies,* 2(2), 186-199.

Habibah, S., Diniaty, A., Diniyah, D., Hasgimianti, H., & Adawiyah, P. R. 2021. Use of Online Counseling Media during the Covid-19 Pandemic. *Educational Guidance and Counseling Development Journal,* 4(2), 8-86.

Hakman, H., Suhadi, S., & Yuniar, N. 2021. The Influence of Workload, Work Stress, Work Motivation on the Performance of Nurses for Covid-19 Patients. *Nursing Care and Health Technology Journal* (NCHAT), 1(2), 47-54.

Hockenberry MJ & Wilson D. 2015. *Wong's Nursing Care of Infants and Chidren.* St Louis: Mosby Inc.

Indonesian Ministry of Health. 2021. *Indonesia Health Profile 2020.* Jakarta: Indonesian Ministry of Health.

Indonesian Ministry of Health. 2022. *Indonesia Health Profile in 2021.* Jakarta: Indonesian Ministry of Health.

Indonesian Ministry of Health. 2017. *Indonesian Health Demographic Survey (SDKI).* Jakarta: Indonesian Ministry of Health.

Islam, M. H., Jubayer, A., Nayan, M. M., Nowar, A., & Islam, S. 2023. Maternal Pregnancy Intention and Antenatal Care Seeking Behaviors in Bangladesh: Evidence From Bangladesh Demographic and Health Survey, 2018. *International Journal of Public Health,* 68, 1605944.

Juwita, R. 2018. The Relationship between Counseling and Family Support on Pregnant Women's Compliance with Taking Fe Tablets. *Endurance Journal: Scientific Study of Health Problems*, 3(1), 112-120.

Kamilia, A. 2019. Low Birth Weight with Incidence of Stunting in Children. *Sandi Husada Health Scientific Journal,* 8(2), 311-315.

Kaspirayanthi, N. K. D., Suarniti, N. W., & Somoyani, N. K. 2019. The Relationship between Mother's Participation in Pregnancy Classes and Knowledge of Danger Signs of Pregnancy and Childbirth in the Denpasar City Area. *The Journal of Midwifery*, 7(2), 116-127.

Kim, K. B., Kim, M. T., Lee, H. B., Nguyen, T., Bone, L. R., & Levine, D. 2016. Community Health Workers Versus Nurses as Counselors or Case Managers in A Self-Help Diabetes Management Program. *American Journal of Public Health,* 106(6), 1052-1058.

Kulon Progo District Health Service. 2021. *2021 Health Profile (2020 Data).* Kulon Progo Regency Health Profile Report for 2021.

Laeliyah, S. N., & Nadjib, M. 2017. Relationship Between Utilization of Health Operational Assistance Funds (BOK) and Increasing Coverage of K4 Antenatal Visits at Serang City Health Centers in 2014-2016. J *Indonesian Health Policy* , 6(3), 115.

Lestari, T. R. P. 2020. Efforts to Improve the Quality of Services at Community Health Centers Through a Health Human Resources Management Approach. *Study,* 23(3), 157-174.

Lubis, D. S., & Hastuty, M. 2018. Behavior of Health Workers in Disseminating Iron Tablets with Pregnant Women's Compliance with Taking Iron Tablets in the Sentajo Raya UPTD Health Work Area, Kuantan Singingi Regency. *Doppler Journal,* 2(1).

Luthfia, A. R., & Alkhajar, E. N. S. 2019. Public Service Practices: Community Health Centers as the Front Guard of Health Services. *DECISION: Journal of Public Administration*,1(2), 71-81.

Mahirawati, V. K. 2014. Related Factors of Chronic Energy Deficiency at Pregnant Woman in Kamoning and Tambelangan Sub District, Sampang District, West Java. *None,* 17(2), 20898.

Malcarney, M. B., Pittman, P., Quigley, L., Horton, K., & Seiler, N. 2017. The Changing Roles of Community Health Workers. *Health Services Research*, 52, 360-382.

Marita, I., Budiyono, B., & Purnaweni, H. 2021. Minimum Quality Service Standards for Pregnant Women's Health. *HIGEIA (Journal of Public Health Research and Development),* 5(1), 39-51.

Mays, G. P., Hesketh, H. A., Ammerman, A. S., Stockmyer, C. K., Johnson, T. L., & Bayne-Smith, M. 2004. Integrating Preventive Health Services Within Community Health Centers: Lessons From WISEWOMAN. *Journal of Women's Health*, 13(5), 607-615.

Mozaffari-Khosravi, H., Noori-Shadkam, M., Fatehi, F., & Naghiaee, Y. 2010. Once Weekly Low-Dose Iron Supplementation Effectively Improved Iron Status in Adolescent Girls. *Biological Trace Element Research*, 135, 22-30.

Murti, N. H., Widjanarko, B., & Rahfiludin, M. Z. 2018. Analysis of Factors Associated with Pregnant Women's Satisfaction with the Quality of Pregnancy Class Services in Semarang City. *Indonesian Journal of Health Management,* 6(2), 121-131.

Naftalin, F., Ayuningtyas, D., & Nadjib, M. 2020. Analysis of the Implementation of Health Operational Assistance (BOK) with Coverage for Handling Obstetric Complications in Bekasi City Health Centers in 2019. *Aceh Public Health Journal (JUKEMA),* 6(2), 154-164.

Naslund, J. A., Shidhaye, R., & Patel, V. 2019. Digital Technology for Building Capacity of Non-Specialist Health Workers For Task-Sharing and Scaling Up Mental Health Care Globally. *Harvard Review of Psychiatry,* 27(3), 181.

National Development Planning Agency. 2020. *Guidelines for Public Health Program Indicators in the RPJMN and Strategic Plan of the Ministry of Health for 2020-2024.* Jakarta: Directorate General of Public Health, Ministry of Health of the Republic of Indonesia.

Noorbaya, S., Johan, H., & Kurnia, N. W. 2019. *Care for Neonates, Infants and Preschool Children.* Yogyakarta: Goshen.

Notoatmodjo, S. (2012). *Health Research Methodology*. Jakarta: PT Rineka Cipta.

Nuryana, H., Usman, A., & Rahayu, S. (2023). Implementation of Health Operational Assistance Funds (BOK) at Puskesmas X Bogor City in 2022. *PROMOTOR,* 6(1), 16-25.

Olaniran, A., Smith, H., Unkels, R., Bar-Zeev, S., & van den Broek, N. (2017). Who is a Community Health Worker?–A Systematic Review of Definitions. *Global Health Action*, 10(1), 1272223.

Pandora, J., Kartasurya, M. I., & Winarni, S. (2018). Use of KIA Books as Educational Media for Pregnant Women (Study in the Tlogosari Kulon Community Health Center Work Area, 2018). *Journal of Public Health (Undip),* 6(2), 63-73.

Perry SE, Hockenberry MJ, Lowdermilk DL & Wilson D. (2010). *Maternal Child Nursing Care. fourth Edition. Missouri:* Mosby Elsevier.

Pillitteri A. (2003). M*aternal & Child Health Nursing: Care of The Childbearing & Childrearing Family. Fourth Edition.* Philadelphia: Lippincot Williams & Wilkins.

Pristya TY, Novitasari A & Hutami MS. (2020). Prevention and Control of LBW in Indonesia: Systematic Review. *Indonesian Journal of Health Development*, no. 2, vol. 3, p. 175-182.

Riskesdas. (2018). National_Report_RKD2018_FINAL.pdf. In Agency for Health Research and Development (pp. 221–222). http://labdata.litbang.kemkes.go.id/images/download/report/RKD/2018/Laporan_Nasional_RKD2018_FINAL.pdf.

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions. *Contemporary Educational Psychology*, 25(1), 54-67.

Safitri, H. O., Fauziningtyas, R., Indarwati, R., Efendi, F., & McKenna, L. 2022. Determinant Factors of Low Birth Weight in Indonesia: Findings From The 2017 Indonesian Demographic and Health Survey. *Journal of Pediatric Nursing,* 63, e102-e106.

Salkeld, G. 1998. What are The Benefits of Preventive Health Care?. *Health Care Analysis*, 6(2), 106-112.

Schulz, A., & Wirtz, M. A. 2020. *Assessing the Quality of Midwifery Care From The Woman´ S Perspective.*

Setiati, A. R., & Rahayu, S. R. S. 2017. Factors that Influence the Incidence of LBW (Low Birth Weight) in the Neonatal Intensive Care Room at Dr Moewardi Hospital in Surakarta. *(JKG) Journal of Global Nursing,* 2(1).

Shamlou, Z., Saberi, M. K., & Amiri, M. R. 2022. Application of Theory of Planned Behavior in Identifying Factors Affecting Online Health Information Seeking Intention and Behavior of Women. *Aslib Journal of Information Management,* 74(4), 727-744.

Shields, A., & Flin, R. 2013. Paramedics' Non-Technical Skills: A Literature Review. *Emergency Medicine Journal: EMJ,* 30(5), 350-354.

Siwi, R. P. Y., Wulandari, A., Retnaningtyas, E., & Astikasari, N. D. 2023. Analysis of Pregnant Women's Motivation and Family Support On Integrated Antenatal Care Participation. *Journal for Quality in Women's Health,* 6(1), 42-50.

Suhartina, S., Ginting, T., Suyono, T., & Sipayung, W. A. 2020. The Influence of Competency and Quality of Health Workers on Outpatient Satisfaction at the Sei Agul Health Center, Medan. *Prima Indonesian Public Health Journal,* 4(2), 86-97.

Sulaiman, E. S. 2021. *Health Management: Theory and Practice in Community Health Centers.* Yogyakarta: UGM Press.

Surya, S., Chalid, S. M. T., & Ahmad, M. 2022. Feasibility of an Android-Based Preeclampsia Screening Application for Pregnant Women ≤ 20 Weeks. *Permas Scientific Journal: STIKES Kendal Scientific Journal,* 12(3), 559-564.

Susanti, R. 2017. The Influence of Midwife Competence, Community Knowledge and Health Facilities on the Health Status of Pregnant Women in Banjarmasin City. *KINDAI,* 13(2).

Susanto, A. 2017. The Role of Posyandu Cadres as Behavior Change Agents for Pregnant Women in Efforts to Reduce Maternal and Infant Mortality Rates. *In Proceedings of the 2nd National Seminar on Applied Science and Technology (SENIT)* (Vol. 2, No. 1, pp. 189-193).

Terpstra, J., Coleman, K. J., Simon, G., & Nebeker, C. 2011. The Role of Community Health Workers (CHWs) in Health Promotion Research: Ethical Challenges And Practical Solutions. *Health Promotion Practice*, 12(1), 86-93.

Thomas, M. J. 2017. *Training and Assessing Non-Technical Skills: A Practical Guide.* CRC Press.

Uwimana, G., Elhoumed, M., Gebremedhin, M. A., Azalati, M. M., Nan, L., & Zeng, L. 2023. Association Between Quality Antenatal Care and Low Birth Weight in Rwanda: A Cross-Sectional Study Design Using The Rwanda Demographic And Health Surveys Data. *BMC Health Services Research,* 23(1), 1-10.

Weyori, A. E., Seidu, A. A., Aboagye, R. G., Holmes, F. A., Okyere, J., & Ahinkorah, B. O. 2022. Antenatal care attendance and low birth weight of institutional births in sub-Saharan Africa. *BMC Pregnancy and Childbirth*, 22(1), 283.

Wijaya, D., & Darusalam, D. 2022. The Impact of Premature Rupture of Membranes (PROM) and Low Birth Weight (LBW) Infant Outcomes to the Survival Rate. *Indonesian Journal of Obstetrics and Gynecology*, 72-78.

World Health Organization. 2018. *WHO Guideline on Health Policy and System Support to Optimize Community Health Worker Programmes.* World Health Organization.

World Health Organization. 2019. *UNICEF-WHO Low Birthweight Estimates: Levels and Trends 2000-2015 (No. WHO/NMH/NHD/19.21).* Geneva: World Health Organization.

Yolanda, A. 2023. *Implementation of Fulfillment of Health Personnel Standards at the Banjarmasin City Health Center* (Doctoral Dissertation, Kalimantan Islamic University MAB).

Yulisa, R., & Imelda, I. 2018. Incidence of Low Birth Weight (LBW) in Aceh Hospitals. *Nursing Faculty Student Scientific Journal*, 3(3).

Yusriani, Y. 2021. Health Workers' Communication Influences Pregnant Women's Behavior in Preventing Hypertension. *An-Nadaa: Journal of Public Health,* 8(2), 196-203.