

ENHANCING UNIVERSAL PRECAUTION IMPLEMENTATION IN SELF-EMPLOYED MIDWIFERY: KEY INFLUENCING FACTORS IN CHILDBIRTH ASSISTANCE

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ABSTRACT

Background: The main causes of maternal death in Indonesia in 2019 are bleeding, hypertension during pregnancy, infections, metabolic problems and others. Approximately 25-50% of maternal deaths are caused by problems related to pregnancy, childbirth and the puerperium. Universal Precaution is an action to control infection that must be carried out by all health workers in order to reduce cases of the spread of infection.

Objective: To find out the factors that influence the implementation of universal precautions in delivery assistance by midwives in the Midwife Independent Practice (PMB) in Padang city.

Methods: This type of research is analytic with a cross-sectional study design. The study population is all midwives who have PMB in the city of Padang. The sample of this research was midwives who had PMB who served delivery assistance, totaling 35 respondents. Sampling using non-probability sampling technique, namely Total Sampling. Data collection was carried out using a questionnaire and the statistical test used was the Chi Square Test.

Results: More than half of the respondents 54.3% had good universal precautions in childbirth assistance, more than half of the respondents 57.1% had a high level of knowledge, more than half of the respondents 68.6%, had a positive attitude more than half of the respondents 54, 3% have less time working, more than half 62.9% have complete facilities and infrastructure. There is a relationship between the level of knowledge and the implementation of universal precautions in delivery assistance with the result $p\text{value} = 0.005 < 0.05$. There is no relationship between attitude and implementation of universal precautions $p\text{value} = 0.150$, length of work and implementation of universal precautions $p\text{value} = 0.640$, availability of facilities and infrastructure with implementation of universal precautions $p\text{value} = 0.149$.

Conclusion: More than half of the respondents have implemented universal precautions both in childbirth assistance, more than half of the respondents have a high level of knowledge, more than half of the respondents have a positive attitude, more than half of the respondents have worked less long, more than half have complete facilities and infrastructure. There is a relationship between the level of knowledge and the implementation of universal precautions in childbirth assistance. There is no relationship between attitude, length of work, availability of facilities and infrastructure with the implementation of universal precautions in childbirth assistance.

KEYWORDS: Implementing universal prevention, level of knowledge, attitude, years of service, facilities and infrastructure.

INTRODUCTION

Universal Precaution is an action to control infection that must be carried out by all health workers in order to reduce cases of the spread of infection. The risk of

spreading infection can be caused by blood and body fluids that have the potential to transmit disease. The World Health Organization (WHO) estimates that there are around 303.00 mothers and 2.7 million babies die each year due to the quality of services during childbirth and more due to diseases that should be preventable, in fact there are 2.6 million babies born dead each year (WHO, 2018) .

The most common causes of maternal death in Indonesia in 2019 are bleeding, hypertension in pregnancy, infections, metabolic disorders, and others (Kemenkes RI, 2019). Approximately 25-50% of maternal deaths are caused by problems related to pregnancy, childbirth and the puerperium (WHO, 2018). Infectious diseases related to health services or Healthcare Associated Infections (HAIs) are a health problem in various countries in the world, including Indonesia. In the Asian Pacific Economic Committee (APEC) or Global Health Security Agenda (GHSA) forums, infectious diseases related to health services have been discussed on the agenda (Permenkes, 2017). The incidence of HAIs is an average of 1 in 10 patients affected by HAIs. In developed countries, 7 cases of HAIs are found for every 100 patients, while in developing countries there are 15 cases of HAIs. In Indonesia this incidence is also very high, namely 15.74% (Kementerian Kesehatan RI, 2020). In principle, it is possible to prevent the impact of HAIs if health care institutions implement an infection prevention program (Permenkes, 2017).

The results of the study (Rizky S.R and Eva H, 2020) showed that there were 22 midwives who had good knowledge of implementing infection prevention practices 100% with a p-value of 0.000, the length of work of the 28 midwives in the old category of work applying universal precautions well was 92.9% with a p-value of 0.005. There is a relationship between the knowledge factor and the application of universal precautions in childbirth and there is a relationship between the length of work and the application of universal precautions in the delivery room of Tgk Chik Ditiro Sigli Hospital. According to Sharma's (2014) research, nurses and midwives were 49.6% compliant with universal precautions.

Based on the author's interviews and observations of 5 midwives at PMB midwives in the city of Padang, it was found that 70% of midwives had not properly applied universal precautions, such as drying hands after washing with a shared towel, not using complete Personal Protective Equipment (PPE) when help with childbirth,

wear gloves or handschoen repeatedly, wash tools without using household gloves. All midwives who have not properly implemented universal precautions say they do not have complete PPE and they feel bothered or uncomfortable using complete PPE. In general, midwives use flip-flops to help with childbirth, do not use masks or protective glasses.

MATERIALS AND METHODS

Based on the author's interviews and observations of 5 midwives at PMB midwives in the city of Padang, it was found that 70% of midwives had not properly applied universal precautions, such as drying hands after washing with a shared towel, not using complete Personal Protective Equipment (PPE) when help with childbirth, wear gloves or handschoen repeatedly, wash tools without using household gloves. All midwives who have not properly implemented universal precautions say they do not have complete PPE and they feel bothered or uncomfortable using complete PPE. In general, midwives use flip-flops to help with childbirth, do not use masks or protective glasses. This type of research is analytic in nature with a cross-sectional study research design which aims to determine the factors that influence the implementation of universal precautions by midwives for delivery assistance at PMB Padang City in 2022. This research was conducted at PMB Padang City. The population of this study were all midwives who have PMB in Padang City. The sample of this research is midwives who have PMB who provide delivery assistance services. Sampling was carried out using a non-probability sampling technique, namely Total Sampling, where the number of samples was all midwives who had PMB who provided birth assistance services, totaling 35 respondents. Data analysis used the chi square statistical test. Ethical Permission was obtained from the Andalusian Medical Research Ethics Commission with a declaration of successful completion of the Ethical Test number 953/UN.16.2/KEP-FK/2022.

RESULTS AND DISCUSSION

Quantitative data were obtained directly from midwives who had PMB and assisted deliveries using a questionnaire regarding the factors that influenced the implementation of universal precautions in delivery assistance by midwives in the

independent practice of midwives in the city of Padang in 2022.

Table 1. Distribution of the frequency of implementing universal precautions in delivery assistance at PMB Padang City

Implementation universal precaution	f	%
Not good	16	45,7
Good	19	54,3
Total	35	100,0

Based on the table above, it can be seen that of the 35 respondents, 19 (54.3%) respondents had good practice in implementing universal precautions in childbirth assistance (Table 1).

Table 2 Distribution of the frequency of factors that affect universal implementation of delivery assistance by midwives at PMB Padang city

Factorsfor Implementing Universal Precaution	f	%
Knowledge level		
Low	15	42,9
Hight	20	57,1
Attitude		
Negative	11	31,4
Positive	24	68,6
Years of service		
Less Old	19	54,3
Old	16	45,7
Fasilities and Infrastucture		
Incomplete	13	37,1
Complete	22	62,9

Based on table 2, it can be seen that more than half of the respondents have a high level of knowledge about universal precautions, more than half of the respondents have a positive attitude, more than half of the respondents have less time working and more than half of the respondents have complete facilities and infrastructure.

Table. 3 The relationship between the factors that influence the universal implementation of delivery assistance by midwives in PMB Padang city

Factorsfor Implementing Universal Precaution	Implementation				Universal Precaution		p- value
	Not good		Good		Amount		
	f	%	f	%	f	%	
Knowledge Level							
Low	11	73,3	4	26,7	15	100	0,005
Hight	5	25,0	15	75,0	20	100	
SAttitude							
Negative	7	63,6	4	36,4	11	100	0,150
Positive	9	37,5	15	62,5	24	100	
Years of service							
Less Old	8	42,1	11	57,9	19	100	0,640
Old	8	50,0	8	50,0	16	100	
Facilities and Infrastucture							
Incomplete	8	61,5	5	38,5	13	100	0,149
Complete	8	36,4	14	63,6	22	100	

Based on table 3, it can be seen that there is a significant relationship between the level of knowledge and the implementation of universal precautions in delivery assistance by midwives where $p < 0.05$ is obtained and there is no significant relationship between attitude, length of work, facilities and infrastructure where $p \geq 0,05$.

Univariate discussion

Implementation of universal precautions.

The results of this study found that more than half (53.3%) of the respondents had good practice in implementing universal precautions in childbirth assistance. The results of this study are almost the same as Iswanti's research in 2017 regarding the knowledge and attitudes of independent practicing midwives towards the implementation of universal precautions in delivery assistance (Kementerian Kesehatan RI, 2020), it was found that 84.1% of respondents were good at implementing universal precautions in childbirth assistance (Iswanti, 2017). Infection Prevention and Control, hereinafter abbreviated as PPI, is an effort to prevent and minimize the occurrence of infection in patients, officers, visitors and the community around health care facilities . According to (JNPK-KR, 2017) the five threads in labor and delivery care, namely making clinical decisions, caring for mothers and babies, preventing infection, recording and referrals. The results of the study (Polycarp et al., 2015) 59 respondents (19.7%) observed complete universal precautions when carrying out their tasks. The

results of this study were also supported by research (Sakona, Yovita, 2018), namely (75%) midwives who had implemented infection prevention according to procedures and only 25% had not implemented infection prevention according to procedures.

Implementation of universal precautions that are always carried out by midwives, namely washing hands before and after physical contact with mothers, before using sterile gloves or high-level disinfection, washing hands according to the six-step procedure for hand washing and midwives have also washed hands in a sink with running water and dry with a tissue or disposable hand cloth. Besides that, other implementations of infection prevention are always carried out by midwives, namely in the process of decontamination of tools after delivery assistance according to standards.

Knowledge level

The results of this study found that more than half (57.1%) of the respondents had a good level of knowledge about universal precautions. The results of this study are almost the same as Iswanti's 2017 study regarding the knowledge and attitudes of independent practicing midwives regarding the implementation of universal precautions in delivery assistance in the South Tangerang City Region. The results showed that 89.8% of respondents had a high level of knowledge about implementing universal precautions in delivery assistance (Iswanti Tutik, R Detty Siti Nurdianti, 2017). Knowledge stored in memory is explored when needed through the form of recall or recognition because there will be new understandings. Ability to recognize and remember terms, definitions, facts, ideas, patterns, sequences, methodologies, basic principles, and so on (Budiman, 2013).

The knowledge possessed by midwives in implementing universal precautions in delivery assistance is in accordance with the answers in the questionnaire, namely knowledge in the main activities in universal precautions including washing hands with running water and using PPE, managing sharp objects and consumables as well as birth aids, and management medical waste. Even though the results of midwifery knowledge are high in implementing universal precautions, there are still 42.9% of respondents who have a low level of knowledge which is indicated by wrong answers on the questionnaire, while knowledge that is still answered incorrectly by respondents includes the ideal time to wash hands, the length of time in decontamination of tools

with chlorine, the use of gloves when washing equipment after assisting in childbirth and the management of sharp object.

Attitude

The results of this study revealed that over half (68.6%) of respondents had a positive attitude toward universal precautions. The results of this study are almost the same as Iswanti's research in 2017 regarding the knowledge and attitudes of independent practicing midwives towards the implementation of universal precautions in delivery assistance in the South Tangerang City Region. The results showed that 78.4% of respondents had a positive attitude about implementing universal precautions in delivery assistance (Iswanti Tutik, R Detty Siti Nurdianti, 2017).

The results of this study are also almost the same as research (Polycarp et al., 2015) where the attitude of respondents towards universal precautions in general in this study has a positive attitude (80%), even though with sufficient knowledge they agree that universal precautions are useful and provide protection for 88.3%. The positive attitude of most health workers can be related to the fear of contracting HIV infection, which most of the respondents understand that universal precautions can prevent it (Budiman, 2013). From the research data, it was obtained that the positive attitude of the respondents towards the implementation of universal precautions included the application of universal using complete self-protection equipment, the application of universal precautions would protect patients and rescue workers, the importance of decontamination in the management of used equipment to help deliveries and the use of syringes closed with a one-handed technique. Even though the attitude of the respondents was more than half positive, there were still 31.4% who had a negative attitude, namely in terms of still agreeing to use flip-flops or not wearing protective shoes in assisting with childbirth, agreeing that there was no need to decontaminate tools after assisting in childbirth, and agreeing to use PPE regularly legkap just bother the officersLength of working

The results of this study found that more than half (54.3%) of respondents had less time working in childbirth assistance. The results of this study are also almost the same as research (Yuliarni, 2012) with the title Factors related to the behavior of applying universal precautions in delivery assistance by midwives at the Puskesmas in

the working area of the Badung Regency Health Office, Bali province where respondents who have worked less long (<10 years) namely 68.6%.

Working period is a grace period that is used by an employee to contribute his energy to the place where they work so that it will produce good productivity. tenure can be interpreted as employee loyalty to the place where he works so that employees who have long working tenure tend to have good productivity. From the results of this study, the working period of the respondents was more than half, that is, less than 10 years, where the length of work for the respondents in this study was 3 months - 5 years, where after graduation they immediately worked in midwifery independent practice.

Facilities and infrastructure

The results of this study found that more than half (62.9%) of the respondents had complete facilities and infrastructure for delivery assistance. The results of this study are almost the same as Tutik Iswanti's research in 2017 concerning the analysis of factors that influence the implementation of universal precautions in delivery assistance by midwives in PMB, the working area of Tangerang City with the result that 80.7% have complete facilities and infrastructure in implementing universal precautions in delivery assistance (Iswanti, 2017).

Availability of facilities and infrastructure is needed to support the implementation of universal precautions, for this reason it is important for midwives to complete facilities and infrastructure to support the implementation of universal precautions such as preparing sinks for hand washing, liquid soap, tissues or disposable towels for drying hands, personal protective equipment, safety boxes, household gloves. From the results of data collection and observations made, although more than half of the respondents have complete facilities and infrastructure in implementing universal precautions in childbirth assistance, there are still respondents who have not completed the facilities and infrastructure as well as a place to manage consumables that are not separated from the bathroom. personally of the respondent, there are still respondents who use hand towels that are hung on the sink and are not disposable and the respondents do not have special gloves to wash equipment after assisting in childbirth.

Bivariate Discussion

The relationship between the level of knowledge and the implementation of universal precautions in delivery assistance by midwives

The results of this study found that there was a significant relationship between the level of knowledge and the implementation of universal precautions in delivery assistance by midwives where a p value ≥ 0.05 was obtained, namely 0.005. The results of this study were supported by Iswanti's research results in 2017 concerning knowledge and attitudes of independent practice midwives the implementation of universal precautions in childbirth assistance in the South Tangerang city area showed that there was a significant relationship between the level of knowledge of respondents and the implementation of universal precautions in childbirth assistance where the result was p value = 0.033. The results of this study are also the same as the research conducted by (Maharani et al., 2022) concerning the behavior of midwives in the management of infection prevention against the incidence of infection in delivery assistance, indicating that there is an influence between the variables of knowledge and the implementation of infection prevention in delivery assistance (p value = 0.015).

Providing information through education, training or seminars can increase a person's knowledge and will then raise awareness to behave in accordance with the knowledge he has. Without knowledge, a person has no basis for making decisions and taking action on the problems at hand. The results of this study reinforce Green's theory which states that the level of knowledge is a predisposing factor in shaping positive behavior. With knowledge someone will know and try or do an action. The addition of knowledge cannot be done in a short time but is done continuously and continuously. Providing new information is also very important so that it can add and deepen knowledge. Thus knowledge will still be a control for someone to behave well (Notoadmodjo. S, 2014).

Relationship between attitude and implementation of universal precautions in delivery assistance by midwives

The results of this study found that there was no significant relationship between attitudes and the implementation of universal precautions in delivery assistance by midwives where a p value ≥ 0.05 was obtained, namely 0.150. The results of this study are in line with the results of research (Iswanti et al., 2018) concerning the

knowledge and attitudes of independent practicing midwives towards the implementation of universal precautions in delivery assistance in the South Tangerang City Region, the results show that there is no significant relationship between the attitudes of respondents and the implementation of universal precautions in delivery assistance (Notoadmodjo. S, 2010) . The results of research (Iswanti Tutik, R Detty Siti Nurdianti, 2017) on independent practicing midwives in the South Tangerang city area show that midwives who have a negative attitude carry out universal precautions in delivery assistance well as much as 78.4%. The results showed that not always respondents with negative attitudes had less universal precaution behavior.

Based on the results of this study, the researchers assumed that there was no relationship between attitudes and the implementation of universal precautions in childbirth assistance, including, even though the attitude was positive, but there were several factors that did not support the implementation of universal precautions, namely that there were still incomplete facilities and infrastructure where the respondent meowed in labor so that it was not can carry out maximum infection prevention, another thing that causes no relationship between attitudes and universal precautions is the absence of supporting factors, namely policies and SOPs related to the implementation of universal precautions.

The relationship between length of work and implementation of universal precautions in delivery assistance by midwives

The results of this study found that there was no significant relationship between length of work and the implementation of universal precautions in delivery assistance by midwives where a $p \text{ value} \geq 0.05$ was obtained, namely 0.640. The results of this study are the same as research (Yuliarni, 2012) Factors Associated with the Behavior of Applying Universal Precautions in Delivery Assistance by Midwives at the Health Office Working Area of the Badung Bali District Health Office in 2012 which states that there is no significant relationship between work experience and the behavior of applying precautions universal assistance in childbirth ($p \text{ value} = 1,000$).

According to the researcher's assumption that there is no relationship between length of work and the implementation of universal precautions, it is also related to inner motivation and will. From the results of this study, respondents who have worked

less than 10 years do more universal precautions well. the other supports are the level of education held by the respondents, namely DIV and Profession.

The relationship between facilities and infrastructure with the implementation of universal precautions in delivery assistance by midwives

The results of this study found that there was no significant relationship between length of work and the implementation of universal precautions in delivery assistance by midwives where a p value ≥ 0.05 was obtained, namely 0.149. The results of this study are also the same as study (Iswanti, 2017) where the results of bivariate analysis show that there is no significant relationship between the availability of facilities and the implementation of universal precautions in delivery assistance by independent practicing midwives in the city of South Tangerang (p value = 0.459; CI = 0.509- 6,921; OR=1,877). The results of this study showed that more midwives who had complete availability of facilities had good behavior (83.1%) and only 16.9% had poor behavior (Purwanti et al., 2014) which stated that there was no significant relationship between the availability of infection prevention facilities and HIV/AIDS infection prevention behavior in delivery assistance (p value = 0.830).

The results of this study are also the same as research (Septina et al., 2015), namely that there is also a relationship between facilities and action, namely 78.9% with the availability of good facilities having good actions, statistically there is no significant relationship between the availability of facilities and action ($p > 0.05$) = 0.48 . According to the researcher's assumption that there is no relationship between facilities and infrastructure and the implementation of universal precautions in childbirth assistance, that is, even though more than half of the respondents have a positive attitude, due to the fact that there are still facilities and infrastructure that are not available at delivery assistance, the management of universal precautions is not implemented properly, besides that Respondents' knowledge of the implementation of universal precautions is low and the absence of SOPs displayed in the delivery room makes universal implementation unfavorable.

CONCLUSION AND RECOMMENDATION

More than half of the respondents had a good implementation of universal precautions in childbirth assistance, more than half of the respondents had a high level of knowledge about universal precautions, more than half of the respondents had a positive attitude, more than half of the respondents had less time of work and more than half of the respondents had the means and complete infrastructure related to universal precautions. There is a relationship between the level of knowledge and the implementation of universal precautions in delivery assistance by midwives in PMB Padang city. There is no relationship between attitudes, length of work, availability of facilities and infrastructure with the implementation of universal precautions in delivery assistance by midwives at PMB Padang City.

It is expected that midwives will further increase their knowledge by participating in training related to infection prevention and implementing infection prevention in accordance with existing regulations and policies and displaying SOPs related to infection prevention in the delivery room

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