

Overview of Health Workers' Knowledge of Pre-Eclampsia in Gowa Regency, Sulawesi Selatan, Indonesia: Cross-sectional Study

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ABSTRACT

Introduction: Maternal mortality caused by preeclampsia continues to increase compared to bleeding and infection.

Objective: This study was to describe the level of knowledge of health workers about the prevention of pre-eclampsia.

Method: Cross sectional study design conducted at 3 Primary health care Sombaopu, Samata, and Bajeng, from April to June 2019. A sample size of 51 people were nurses, midwives, and doctors in the antenatal care room. The research instrument used a questionnaire of 25 questions about understanding, causes, symptoms, and prevention of pre-eclampsia. Reliability test with Cronbach Alpha value of 0.756 > 0.600 so that the instrument was declared reliable. Data analysis uses frequency distribution. Research ethic from the ethics committee of the Faculty of Medicine and Health Sciences Universitas Islam Negeri Alauddin Makassar Number A.110 / KEPK / FKIK / V / 2019 with No. Registrar UINAM19050110.

Conclusion: Health workers have a level of knowledge about preeclampsia (all aspects) that falls into the good category of 38 people (74.5%), the aspect of understanding of preeclampsia, most health workers have a good level of knowledge found in 39 person (74.4%), the causes of preeclampsia most health professionals have a good level of knowledge with the number the smallest were 19 person (37.2%), the signs and symptoms of preeclampsia some health workers have a good level of knowledge as many as 43 people (84.3%), the prevention of preeclampsia, most health workers have a good level of knowledge about prevention as many as 49 people (96.01%). **Conclusion:** Knowledge of health workers both in terms of understanding, signs, and symptoms, and prevention in the good category unless the cause is in the sufficient category.

Keywords: Health Worker; Knowledge; Pre Eclampsia

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INTRODUCTION

Maternal mortality is a matter of concern in all countries. It rates in various countries experienced differences between countries such as Switzerland, maternal deaths by 73 percent (1) compared to countries in Sub-Saharan Africa and Asia, maternal deaths were higher by 90 percent (2). The cause of maternal death occurred due to direct obstetric causes, namely bleeding by 27.1 percent. (3) in African countries say that the cause of maternal death is postpartum hemorrhage (PP), followed by eclampsia and pre-eclampsia, delayed labor, infection, and indirect causes. Two-thirds of deaths due to bleeding occur in the postpartum period.

The cause of maternal death is preeclampsia (PE), for developing countries higher than developed countries the incidence of preeclampsia is around 6 to 7% and eclampsia 0.1 to 0.7% (4). The incidence of preeclampsia is influenced by several factors such as race, parity, genetic and environmental factors. PE is one other cause of maternal death puerperal hemorrhage of about 26.9%, eclampsia during childbirth 24%, bleeding 28%, infection 11%, puerperium complications 8%, obstetric trauma 5%, obstetric embolism 3%, abortion 5% and others 11% (5).

Indonesia was a developing country with a high maternal mortality rate (MMR) and perinatal mortality, the third-highest in ASEAN and the second highest in the South East Asian Nation Regional Organization (6). Compared to various countries in Southeast Asia (Purwoastuti, 2015). AKI is included in the 2015 Sustainable Development Goals (SDG's) achievement target of reducing AKI in 2019 to 306 / 100,000 live births (7).

Maternal and infant mortality rates in South Sulawesi are regencies namely Gowa, Bone, Jeneponto Bulukumba, Pangkep, Luwu, Sinjai, Maros, Toraja, while North Luwu and Makassar were ranked sixth (8). was caused by bleeding in the majority of 40 cases and hypertension in pregnancy 35 cases. Over these conditions, the importance of early detection at the time of Antenatal Care and appropriate and appropriate handling of standards can prevent both conditions (9).

Health workers need to do screening to find out the signs and symptoms of eclampsia. So expect no maternal deaths due to preeclampsia (4). So that research is needed to determine the knowledge of health workers for preeclampsia.

MATERIALS AND METHODS

The research method used is quantitative. The design used is a descriptive research design Descriptive method is used to describe the level of knowledge of health workers about pre-eclampsia.

Population and Study Settings

This research was conducted in the working area of Sombaopu, Samata, and Bajeng Community Health Centers in April and June 2019. Somba Opu represents urban areas, Samata is a transition area between urban and rural areas and Bajeng represents rural areas.

The data collection tools used were questionnaires. The questionnaire used was a questionnaire consisting of 25 questions. Questions about understanding 4 questions, cause 9, signs and symptoms 5, prevention 7 that have been tested for reliability

Inclusion criteria:

Nurses and midwives who work in the ANC room

Doctors who work at the research location Puskesmas

D3 education to undergraduate

How to withdraw samples: Census sampling

Sample size: 51 health works consisting of 37 midwives, 11 nurses, and doctors 3.

Descriptive Design

The design used is a descriptive research design. Aims to obtain information about the level of knowledge of health workers to early detection of preeclampsia

Variable:

The level of knowledge about pre-eclampsia is understanding, signs and symptoms, prevention Analysis

The data processing is then processed using the SPSS program. The data is presented in an analysis by presenting a frequency distributive table (10).

RESULTS

This study about the description of knowledge of health workers about pre eclampsia in Gowa.

1. *Characteristics of Respondents*

Table 1. A Distribution of Frequency of Respondents by Age, Profession, Education, and years of the worker in Health Workers

Characteristics	Frequency	Presentation
Age		
21-30 year	34	66.6
31-40 year	5	9.8
41-50 year	12	23.5
Profesi		
Nurse	11	21.5
Midwifery	37	72.5
Docter	3	5.8
Education		
D3	30	58.8
D4	14	27.4
Bachelor	7	13.7
Years of worker		
1 moon- 1.9 year	8	15.6
2 - 10 year	33	33
10.1 - 20 year	7	13.7
20.1 - 30 year	3	5.8
Total	51	100

2. *Level of knowledge of health workers about preeclampsia in primary health care at Gowa District.*

Table 2. A Distribution of Frequency Level of knowledge of health workers about preeclampsia in primary health care at Gowa District.

Characteristics	Frequency (person)	Presentation (%)
Knowledge about preeclampsia(all aspects)		
Well	38	74.5
Enough	13	25.4
Less	0	0
Total	51	100

Table 2. shows that the of majority health workers have a level of knowledge about preeclampsia (all aspects) that fall into the category of quite as many as 13 person (24.4%) and that falls into the good category of 38 people (74.5%)

3. *The level of knowledge of health workers about the meaning of preeclampsia in primary health care at the Gowa District*

Table 3. A Distribution of Frequency Level of the meaning of preeclampsia in primary health care at Gowa District.

Characteristics	Frequency (person)	Presentation (%)
Knowledge about preeclampsia(all aspects)		
Well	39	74.4
Enough	12	23.5
Less	0	0
Total	51	100

Table 3. Shows that based on the aspect of understanding of preeclampsia, most health workers have a sufficient level of knowledge of 12 people (23.5%) and a good level of knowledge found in 39 people (74.4%).

4. *The level of knowledge of health workers about the causes of preeclampsia in Primary Health Care at Gowa District*

Table 4. A Distribution of Frequency Level cause of preeclampsia in primary health care at Gowa District.

Characteristics	Frequency (person)	Presentation (%)
Knowledge about preeclampsia(all aspects)		
Well	19	37.274.5
Enough	21	41.1
Less	11	21.5
Total	51	100

Table 4 shows that based on the causes of preeclampsia, most health professionals have a sufficient level of knowledge of 21 people (41.1%) and less knowledge level of 11 people (21.5%), and health workers who have a good level of knowledge with the number the smallest were 19 people (37.2%).

5. *The level of knowledge of health workers about the signs and symptoms of preeclampsia in Primary Health Care at Gowa District*

Table 5. A Distribution of Frequency Level of knowledge of health workers about preeclampsia in primary health care at Gowa District.

Characteristics	Frequency (person)	Presentation (%)
Sign and symptom preeclampsia(all aspects)		
Well	43	84.3
Enough	6	11.7
Less	2	3.9
Total	51	100

Table 5 shows that based on the signs and symptoms of preeclampsia some health workers have a good level of knowledge as many as 43 people (84.3%) and vice versa health workers who have less knowledge level are found in the smallest number of 2 people (3.9%) and health workers who have levels sufficient knowledge of 6 people (11.7%).

6. *The level of knowledge of health workers about the prevention of preeclampsia in the Primary Health Care Gowa District*

Table 6. Distribution Frequency The level of knowledge of health workers about the prevention of preeclampsia in the Primary Health Care Gowa District

Characteristics	Frequency (person)	Presentation (%)
Sign and symptom preeclampsia(all aspects)		
Well	49	96.01
Enough	2	3.9
Total	51	100

Table 6 shows that based on the prevention of preeclampsia, most health workers have a good level of knowledge about prevention as many as 49 people (96.01%) and vice versa health workers with a sufficient level of knowledge of 2 people (3.9%).

DISCUSSION

Knowledge of health workers about preeclampsia

Knowledge is an introduction to an object or thing objectively. Knowledge is an activity developed through the learning process and stored in memory will be dug up when it will be needed through the form of memory. Knowledge is an important domain factor for the formation of one's actions (11).

The majority of health workers have a good level of knowledge found in 39 people (74.4%). so it can be concluded that the behavior is influenced by a person's experience, factors outside the person (environment), both physical and non-physical and socio-cultural, then the experience is known, perceived, believed, giving rise to motivation, intention to act and eventually becomes behavior. And look at the length of service with a span of 2-10 years are the most influential on the ability to make an appropriate referral to preeclampsia cases. Midwife are theoretically able to know the sign and symptoms of PE, it can have an impact on the inaccuracy in referencing preeclampsia/eclampsia cases due to environmental and experiential factors.

Knowledge of health workers about the causes of preeclampsia is still lacking. Factors that can increase the incidence of preeclampsia are first-time pregnancy (primigravida), Polihidramnion, genially, large fetus, and concomitant diseases in the mother such as kidney disease, hypertension (12).

Preeclampsia is due to a complex immunologic mechanism and blood flow to the placenta is reduced. As a result, the supply of nutrients needed by the fetus is reduced. So that, if it lasts longer the incidence of preeclampsia will get worse and can inhibit fetal growth. Preeclampsia can cause harm to the mother and fetus. The symptoms are swelling in some parts of the body, especially the face and hands. And it will be more dangerous if accompanied by a sudden increase in blood pressure and high protein levels in the urine (13).

Based on theory health workers need knowledge about the causes of preeclampsia. So that workers are able to do early detection. It can reduce the incidence of preeclampsia in pregnant women because according to Manuaba almost 50% of maternal and fetal deaths are caused by preeclampsia. So we need knowledge of health workers about the causes of preeclampsia.

People in Indonesia with a variety of cultures assume that pregnancy is normal for women. So they felt they did not need to check themselves regularly to the health service. There are still many mothers who are less aware of the importance of antenatal care so that no risk factors can be detected, including preeclampsia. This risk is only known at the time of delivery which is often difficult to handle so that the fatal result is death. This is caused by the low level of knowledge and lack of information about preeclampsia, including regarding the prevention aspects of preeclampsia (14).

Counseling and education to pregnant women to reduce the incidence of preeclampsia, including ANC examination, classes of pregnant women, posyandu, and pregnancy exercises effort to reduce the incidence of preeclampsia (15). regulating diabetes low salt, maintain excessive weight gain, and take a rest (16).

Based on these data shows that the knowledge of health workers is mostly included in good knowledge. Knowledge is influenced by several factors including age, education, mass media/information, socio-cultural and economic, environment and experience (17). Based on

the result of the study 2014 (18,19) research on the determinants of analysis affecting village midwives in the accuracy of referrals in cases of preeclampsia/eclampsia in Banyumas district showed no significant relationship between knowledge and accuracy in referring village midwives to cases of pre-eclampsia/eclampsia.

So that researchers assume that knowledge is very important for our lives, and knowledge about health and health issues, especially the problem of preeclampsia because preeclampsia can affect the mother and fetus, but incorrectly detecting the incidence of preeclampsia not only with good knowledge but also depends on the results of analysis and experience health workers in handling the case. Although in theory, health workers are able to understand, in terms of experience and external factors that are less supportive, it will have an impact on the inaccuracy in referring to preeclampsia/eclampsia cases(19-23).

Research Ethics:

Research ethics from the ethics committee of the Faculty of Medicine and Health Sciences Alauddin State Islamic University Makassar Number A.110 / KEPK / FKIK / V / 2019 with No. Registrar UINAM19050110

CONCLUSION

Knowledge of health workers based on aspects of the understanding, signs and symptoms, prevention of preeclampsia, most have of a good level of knowledge; except the cause of preeclampsia in the have a sufficient level of knowledge;

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CONFLICT OF INTEREST

All authors declare no conflicts of interest in this paper.

REFERENCES

1. Say L, Chou D, Gemmill A, Tunçalp Ö, Moller AB, Daniels J, et al. Global causes of maternal death: A WHO systematic analysis. *Lancet Glob Heal.* 2014;2(6):323–33.
2. Barnes-josiah D, Myntti C, Augustin A. "Three Delays" As a Framework for Examining Maternal Mortality in Haiti". *Soc, Sci Med.* 1998;46(8).
3. Gil-González D, Carrasco-Portiño M, Ruiz MT. Knowledge gaps in scientific literature on maternal mortality: a systematic review. *Public Health Rev.* 2006;84(11):903–9.
4. Situmorang T. Faktor - Faktor Yang Berhubungan Dengan Kejadian Preeklampsia Pada Ibu Hamil Di Poli KIA RSUD Anutapura Palu. *J Kesehatan Tadulako.* 2016;2(1).
5. Kementerian Kesehatan RI. Kemenkes RI. Rencana Strategis Kementerian Kesehatan Tahun. 2015;

6. WHO. WHO Recommendations On Health Promotion Interventions for Maternal and Newborn 2015. 2015;
7. Service DH. Annual Report of Yogyakarta Special Region Health Office. 2016.
8. Luwu DK. Profil Kesehatan Kabupaten Luwu Tahun 2014. 2014;
9. Dines Kesehatan. Profil Kesehatan Provinsi Sulawesi Selatan. Vol 91, Dinas Kesehatan. 2017.
10. Notoatmodjo. Health Research Methodology. Jakarta: Rineka Cipta.; 2005.
11. Perdana N. Level of Knowledge of Pregnant Women about Preeclampsia in Brujul Village. Stikes Kusuma Husada. 2013;
12. Manuaba. Obstetrics, Gynecology and Family Planning. Jakarta; 2010.
13. Indiarti. Relationship between Age and Preeclampsia with Postpartum Hemorrhage Occurrence in Bantul Senopati Hospital General Hospital. Jogjakarta; 2010.
14. Roslian. Description of Pregnant Women Knowledge about Preeclampsia in Banguntapan II Health Center, Bantul. 2015;
15. Indrawati. IMidwife level of knowledge about preeclampsia at the Husin Family Clinic in Medan. 2015;16(1).
16. Mochtar. Reference Book for Maternal and Neonatal Health Services. Bina Pustaka Sarwono Prawirohardjo Found. 2010;
17. Notoadmodjo. Health Education and Behavior. Jakarta: PT Rineka Create; 2008.
18. Gemy Nastity Handayani, Trimaya Cahya Mulat, Eka, Anwar Mallongi. Resistance Test of Some Bacterial Synthetic Calcular Cycinaris Invitro Amoxicillin and Ciprofloxacin Antibiotics in TK II Pelamonia Hospital Makassar, Indonesia. Sys Rev Pharm 2020;11(6):1181-1184
19. Eka A and. Determinant Analysis that Affects Village Midwives in Referral Accuracy in Preeclampsia / Eclampsia Cases in Banumas District. YLPP Midwifery Academy Purwokerto. J Ilm. 2014;5(2).
20. Birawida, A.B., Selomo, M., Mallongi, A. Potential hazards from hygiene, sanitation and bacterium of refill drinking water at Barrang Lompo island (water and food safety perspective) IOP Conference Series: Earth and Environmental Science 2018; Volume 157, Issue 1, Article number 012034
21. Russeng, S.S., Saleh, L.M., Virani, D., Latief, A.W.L., Mallongi, A. The investigation of the lactic acid change among employee of national electrical power plan. Indian Journal of Public Health Research and Development 2018; Volume 9, Issue 1, Pages 361-365
22. Masriadi, Azis, R., Sumantri, E., Mallongi, A., Effectiveness of non pharmacologic therapy through surveillance approach to blood pressure degradation in primary hypertension patients, Indonesia., Indian Journal of Public Health Research and Development. Volume 9, Issue 4, April 2018, Pages 249-255
23. Posmaningsih, D.A., Aryasih, G.A.M., Hadi, M.C., Marwati, N.M., Mallongi, A. The influence of media booklet in behavior change of waste management in elementary school students, South Denpasar, Bali., Indian Journal of Public Health Research and Development. Volume 9, Issue 8, August 2018, Pages 1506-1511