

The Effect of Training on Efforts to Reduce Maternal Mortality Risk to Behavior of Community-Based Safe Motherhood Promoters (SMPs)

Yusriani¹, Muhammad Khidri Alwi¹, Heru Santoso Wahito Nugroho²

¹Faculty of Public Health, Indonesian Moslem University, Makassar, Indonesia,

²Health Polytechnic of Surabaya, Indonesia

ABSTRACT

This study aimed to determine the effect of training on efforts to reduce maternal mortality risk to behavior of community-based Safe Motherhood Promoters (SMPs) in Jeneponto District, using “Pretest-Posttest with control Group Design”. Data collected through observation and interview to 46 respondents. Data were analyzed by Mann Whitney-U, Wilcoxon, McNemar and Spearman correlation test. The results were: 1) There was no difference in knowledge, attitude and skill between Safe Motherhood Promoters (SMPs) group and control group before the training, 2) There was a difference in knowledge, attitude, and skill between SMPs group and control group after the training, 3) There was difference in knowledge, attitude, and skill of SMPs group between before and after the training, 4) There was no difference in control group knowledge, attitude, and skill between before and after training. It could be concluded that there is an effect of training on reducing maternal mortality risk to knowledge, attitude, and skill of community based SMPs.

Keywords: *Safe Motherhood Promoters, Maternal Mortality Risk, Knowledge, Attitude, Skill*

INTRODUCTION

Maternal Mortality is one of the major global health problems, and generally occurs mainly in developing countries. The global agreement called the Millennium Development Goal (MDGs) in particular the fifth objective aims to reduce three-quarters of Maternal Mortality Rate (MMR) by 2015 - on the basis of 1990⁽¹⁾. Several countries have successfully achieved MMR targets, and some other countries, including Indonesia, despite the decline, the MDGs 2015 target is not reached⁽²⁾.

Indonesian Demographic and Health Surveys (IDHS) in 2012 showed a very poor result of maternal mortality rate increased from 228 / 100.000 live birth in 2007 reached 359 per 100 thousand live births. In South

Sulawesi, in 2012 there was an increasing in MMR comparing to the previous three years with the number of maternal deaths of 160 people or 110.26 per 100,000 live births. In 2013 again a sharp decline with the number of deaths 115 people or 78.38 per 100,000 live births. It consist of maternal death 15.65%, maternal deaths 51.30% postpartum maternal mortality 33.04%^(3,4). In Jeneponto district increased from 2011 to three peoples (46 per 100,000 live births) to 11 people (170 per 100,000 live births) in 2012. Then there was a decrease in 2013 by 5 people (82 per 100,000 live births), and increased in 2014 (13 people of maternal death), while in 2015 = 8 people death⁽⁵⁾.

A substantial increase in MMR out of estimates, quite a lot of interventions implemented by the Indonesian government. However, it did not produce maximum results as an ideal condition if the community trained to be “Safe Motherhood Promoters (SMPs)”. In an effort to reduce the risk of maternal death with the aim, the community can affect mothers and families about risk factors of maternal mortality, services during pregnancy, safe pregnancy and childbirth planning, and postnatal

Corresponding Author:

Heru Santoso Wahito Nugroho

E-mail: heruswn@gmail.com

Health Polytechnic of Surabaya

Jl. Pucang Jajar Tengah 56, Surabaya, Indonesia

care, to reduce maternal mortality.

MATERIALS AND METHOD

This research used “Pretest-Posttest with Control Group Design”. The intervention was training by using role-play and counseling skills, as well as reference aids, training manuals, and reporting logging forms^(6,7). Data collection used observation, and interview using questionnaire. The respondents are 46 people of Bululoe PHC. Methods of data analysis using Mann Whitney test and Spearman correlation test.

FINDINGS

This research conducted in the working area of Bululoe PHC Jenepono district. Based on the results of data analysis, obtained information as follows:

Table 1. Characteristics of Respondents

No	Characteristics	Sample Groups				Total	
		Experiments		Control		N=46	100%
		n=23	100%	n=23	100%		
1	The Origin of the Village						
	Jombe	5	10.9	5	10.9	10	21.7
	Tanjonga	6	13.0	6	13.0	12	26.1
	Mangepong	6	13.0	6	13.0	12	26.1
	Bululoe	6	13.0	6	13.0	12	26.1
2	Age (Year)						
	20-30	8	34.8	8	34.8	16	34.8
	31-40	10	43.5	10	43.5	20	43.5
	41-50	5	21.7	5	21.7	10	21.7
3	Education						
	Elementary School	1	4.3	1	4.3	2	4.3
	Junior High School	8	34.8	8	34.8	16	34.8
	Senior High School	6	26.2	6	26.2	12	26.2
	Diploma II	1	4.3	1	4.3	2	4.3
	Diploma III	4	17.4	4	17.4	8	17.4
	College	3	13.0	3	13.0	6	13.0
4	Work						
	Housewife	16	69.7	16	69.7	32	69.7
	Farmers	1	4.3	1	4.3	2	4.3
	Internships	2	8.7	2	8.7	4	8.7
	Honorary	3	13.0	3	13.0	6	13.0
	Enterpreneur	1	4.3	1	4.3	2	4.3

Table 2. Knowledge, Actitude and Skill before Provision of Training

No	Variable (Pre-Test)	Groups				Total		p value
		Experiments		Control		N=46	100%	
		n=23	100%	n=23	100%			
1	Knowledge							
	Less	16	69.6	18	78.3	34	73.9	0.507
	Enough	7	30.4	5	21.7	12	26.1	
2	Actitude							
	Negative	8	34.8	10	43.5	18	39.1	0.550
	Positive	15	65.2	13	56.5	28	60.9	
3	Skill							
	Not-Good	21	91.3	22	95.7	43	93.5	0.555
	Good	2	8.7	1	4.3	3	6.5	

Mann Whitney-U

Table 3. Knowledge, Actitude and Skill after Provision of Training

No	Variable (Pre Test)	Sample Groups				Total		p value
		Experiments		Control		N=46	100%	
		n=23	100%	n=23	100%			
1	Knowledge							
	Less	0	0	17	73.9	17	37.0	0.000
	Enough	23	100	6	26.1	29	63.0	
2	Actitude							
	Negative	0	0	13	56.5	13	28.3	0.000
	Positive	23	100	10	43.5	33	71.7	
3	Skill							
	Not Good	0	0	23	100	23	50.0	0.000
	Good	23	100	0	0	23	50.0	

Mann Whitney

Table 4. Effect of Training on Changes in Knowledge, Actitude and Skills

No	Variable	Sample Groups						p value
		Experiments			Experiments			
		Mean	Median	Min-Max	Mean	Median	Min-Max	
1	Knowledge	16.3	18	3-21	1	1	(-10)-15	0.000
2	Actitude	43.5	42	5-75	-4.2	-3	(-28)-29	0.000
3	Skill	7.8	8	3-10	0.17	0.0	(-3)-3	0.000

Spearman Correlation

DISCUSSION

Knowledge

The majority of people had less knowledge before the intervention given in the group of SMPs (69.6%) and the control group (78.3%). There were 30.4% SMPs and 21.7% controls have sufficient knowledge, because there are those who go to junior high school, senior high school and college.

There was no difference of knowledge between SMPs group and control group before giving training. After giving intervention, 100% SMPs had enough knowledge, and control group only 26.1%. The knowledge according to Azwar could them aware, know, understand, willing and able to conduct a suggestion that there is a relationship with health^(8,9).

There was difference of knowledge between SMPs group and control group after giving training intervention. This stated training transfer knowledge, skills, behavior, and attitude in working on a specific ability^(10,11).

The results of this study is available with August's research (2016) that community-based interventions that employ public health workers as teachers in delivering Home Based Life Saving Skills programs to pregnant women and their families increased their knowledge of alarms during pregnancy, labor and postpartum. Preparation for childbirth and increased delivery at health facilities employing skilled health workers in rural communities⁽¹²⁾.

There was influence of giving training about effort to decrease maternal mortality risk to knowledge change

of Safe Motherhood Promoters. This is in line with the results of research states that increased knowledge and attitude of mothers after gave treatment is the result of providing health education with audiovisual media⁽¹³⁾.

According to WHO that the change in health behavior that originated from the provision of information is a form of behavior change through education or health promotion, using Participation Discussion method, which is one good way in order to provide information and Health messages⁽¹⁴⁾.

Attitude

The majority of people had positive attitude before giving of intervention that is on SMPs group (65.2%) and control group (56.5%). The forming factors that occur because of the social interaction experienced by individual, so that individuals interact to form patterns of attitude⁽⁹⁾. This also fit to Aghoja, et al. (2010) statement that for the realization of the attitude in order to become a real action, necessary supporting factors or a condition that allows, among others, facilities⁽¹⁵⁾. This study reinforced by the theory that states that one's attitude is a very important component in health behavior, which then assumed that there is a direct relationship between attitudes and behavior of a person⁽⁹⁾.

There were 34.8% of SMPs and 43.5% of controls with negative attitude. This is due to a lack of knowledge about efforts to reduce the risk of maternal death. Other factors that influence the formation of attitudes include personal experience, culture, others who considered important and the mass media.

There was no difference of attitude between SMPs group and control group before giving training

intervention about effort to decrease maternal mortality risk. After giving intervention, 100% SMPs had a positive attitude, and the control group was only 43.5%. This is because one of the components that make up an important attitude is the cognitive component, because a good attitude occurs after knowledge is also good.

There was difference of attitude between SMPs group and control group after giving training intervention about effort to decrease maternal mortality risk. Referring to the statement attitude cannot separated from the socialization of the family, school or outside school education and knowledge in the community. The role of education cannot ignored, because education done almost for life, either through formal or informal education⁽¹⁶⁾.

There was influence of giving training about effort to decrease maternal mortality risk to change attitude of SMPs. This fit to the results of Okour et al. (2012) on the effect of education on the attitude of pregnant women. She stated that the increase of respondent information has an impact on the improvement of knowledge, where after they understand it they will evaluate their behavior when they feel inappropriate behavior then they will choose better behavior to improve their attitude⁽¹⁷⁾.

Skill

Skill is the result of repetitive exercise, which can called an increasing or progressive change by the person who studies the skill as result of a particular activity^(18,19). In this study, the skill assessment done directly in the simulation. The majority of the community had bad skills before giving intervention in SPMs group (91.3%) and control group (95.7%). Behavior change or adopting new behaviors follows the stages of change: knowledge, attitude, practice⁽²⁰⁾.

There were 8.7% of SMPs and 4.3% controls with good skill. This is due to good knowledge and positive attitude toward reducing the risk of maternal death. The results fit to the theory of Green (2000), that the knowledge possessed by a person is one of the predisposing factors to facilitate a person to behave and behave specifically⁽⁹⁾.

There was no difference of skill between SMPs group and control group before giving training intervention about effort to decrease maternal mortality risk. This aspect, according to Notoatmodjo (2007) if it requires

an institutional or sustainable behavior then treated the positive knowledge and belief/attitude about what will done.

After giving 100% intervention, SMPs have good skill, and control group 0%. This result fit to the Green theory⁽⁹⁾. He stated a change in a person's behavior influenced by predisposing factors that facilitated a person or society behave. In this case, the mother's knowledge about efforts to reduce the risk of maternal death. Reinforcing factors are factors that strengthen and support a person or society behaves (in this case is the support provided by the husband, family, community and health workers).

There was a difference of skill between SMPs group and control group after giving training intervention about effort to decrease maternal mortality risk. This is in line with the research of Rifkin (1987) states that a community-based antenatal education program can increase women's chances of adopting health-beneficial behavior in the post-natal period⁽²¹⁾.

This study supports the theory of Thaddeus, Maine (1994) that the health behavior of a person or society determined through the intention of the person towards the object of health, the presence or absence of support from the surrounding community. Whether or not information about health, freedom from individuals to take decisions or actions and situations that enable him to behave or not behave⁽²²⁾.

There was influence of giving training about effort to decrease maternal mortality risk to change of skill of SMPs. This is in line with Lankester (2000) that training improves knowledge, and knowledge plays an important role in the determination of attitudes and behaviors^(23,24,25). In line with the results of research which informs that skills improvement after training in intervention groups is higher than In the control group^(26,27,28,29,30).

CONCLUSION

The results of this study expect to improve the health condition of mothers. The results of community empowerment in the form of Safe Motherhood Promoters (SMPs) can be a meaningful investment and sustainable. It is a local resident and is less likely to move or stop being SMPs Groups of mothers, husbands, families and communities generally become easier in accessing messages of the mother's health aspects through Safe

Motherhood Promoters (SMPs), while the number of health workers in the village is still relatively limited.

ADDITIONAL INFORMATIONS

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

The author(s) fully thanks to the Minister of Research and Technology, Higher Education for the financial support for the research, authorship, and/or publication of this article by the name of Doctoral Research Grant Funding.

This research has passed the ethical clearance test in accordance with the applicable regulations in Indonesia.

REFERENCES

1. WHO. Trends in Maternal Mortality: 1990 to 2010. Geneva: WHO-World Bank; 2012.
2. UNICEF. Maternal and Child Health, Issue Brief. October 2012.
3. Ansariadi. Epidemiology of Maternal Death in South Sulawesi 2008-2013 - What Has Been Changed? (Epidemiologi Kematian Ibu di Sulawesi Selatan 2008-2013-Apa yang Telah Dirubah?). Makassar: FKM Unhas; 2014.
4. Dinkes SulSel. Health Profile of South Sulawesi Province (Profil Kesehatan Propinsi Sulawesi Selatan). Makassar: Dinkes Prov.Sulawesi Selatan; 2012.
5. Dinkes Kab.Jeneponto. Health Profile of Jeneponto District (Profil Kesehatan Kabupaten Jeneponto). Dinkes Kab.Jeneponto; 2014.
6. Moore KM. A Behaviour Change Approach to Investigating Factors Influencing Use of Skilled Care in Home-Bay District, Kenya. Washington-DC: The CHANGE Project/Academy for Education and Development/Manoff Group; 2002.
7. Joseph N. Mojekwu and Uche Ibekwe, Maternal Mortality in Nigeria: Examination of Intervention Methods, *International Journal of Humanities and Social Science*. 2(20):135-149.
8. Rosato M, Laverack G, Grabman L, Tripathy P, Nair N, Mwansambo C, Azad K, Morrison J, Bhutta Z, Perry H, et al: Alma-Ata: Rebirth and Revision 5. Community Participation: Lessons for Maternal, Newborn, and Child Health. *Lancet* 2008;372:962-971.
9. Elder J, Ayala G, Harris S. Theories and Intervention Approaches to Health-Behavior Change in Primary Care. *Am J Prev Medicine*. 1999;17:275-284.
10. UNFPA. Maternal Mortality Update 2002, A Focus on Emergency Obstetric Care. New York: UNFPA; 2003.
11. UNFPA, SAFE Research Study and Impacts. Maternal Mortality Update 2004, Delivery into Good Hands. New York: UNFPA; 2004.
12. August, et al. Effectiveness of The Home Based Life Saving Skills Training by Community Health Workers on Knowledge of Danger Signs, Birth Preparedness, Complication Readiness and Facility Delivery, Among Women in Rural Tanzania. *BMC Pregnancy and Childbirth*. 2016;16:129.
13. McCarthy J, Maine D. A Framework for Analyzing The Determinants of Maternal Mortality, *Studies in Family Planning*. 23(1):23-33.
14. WHO. Reduction of Maternal Mortality. A joint WHO/ UNFPA/ UNICEF/ World Bank statement. Geneva; 1999.
15. Aghoja, et al. Maternal Mortality and Emergency Obstetric Care in Benin City, South-South Nigeria. *Journal of Clinical Medical and Research*. 2010;2(4):055-060.
16. Abouzar C, Warldow T. Maternal Mortality at the End of Decade: Signs of Progress? *Bulletin of the WHO*. 2001;79(6):561-573.
17. A.M. Okour, et al. Maternal Mortality in Jourdan: Role of Substandard Care and Delays. *Eastern Mediterranean Health Journal*. 2012;18(5):426-431.
18. Waterstone M, Bewley S, Wolfe C. Incidence and Predictors of Severe Obstetric Morbidity: Case Control Study. *British Medical Journal*. 2001;322:1089-1094.
19. Yaya, Yallso, et al. Maternal Mortality in Rural South Ethiopia: Outcomes of Community-Based Birth Registration by Health Extension Workers. *Plos One*. 2015;23.
20. Cotello A, Osrin D, Manandhar D. Reducing Maternal and Neonatal Mortality in the Poorest Communities. *British Medical Journal*. 2004;329:1166-1168.

21. Rifkin SB. Primary Health Care, Community Participation and the Urban Poor: a Review of the Problems and Solutions. *Asia-Pacific J Public Health*. 1987;1:57-63.
22. Thaddeus S, Maine D. Too Far to Walk: Maternal Mortality in Context. *Soc-Sci Med*. 1994;38:1091-1110.
23. Lankester T. Setting up Community-Based Health Program: A Practical Manual for Use in Developing Countries. London: McMillan Education Ltd, 2; 2000.
24. Fang Ye, et al. The Immediate Economic Impact of Maternal Deaths on Rural Chinese Household, *PLoS One*. 2012;7(6):e38467.
25. Yusriani. Nutritional Status Survey of Health and Behavior of Pregnant Women in Bontomate'ne Health Center of Jeneponto District, Indonesia. *Public Health of Indonesia*. 2016;2(2):55-67. Available from: <http://stikbar.org/ycabpublisher/index.php/PHI/index>. ISSN: 2477-1570
26. Mavalankar DV, Rosenfald, A. Maternal Mortality in Resource Poor Setting: Policy Barriers to Care. *American Journal of Public Health*. 2005;95(2).
27. Santarelli C. Working with Individuals, Families and Community to Improve Maternal and Newborn Health. Geneva: (WHO/FCH/RHR/03.11), World Health Organization; 2003.
28. Robertson T, et al. Initial Experiences and Innovations in Supervising Community Health Workers for Maternal, Newborn, and Child Health in Morogoro Region, Tanzania. *Hum. Resour. Health*. 2015;13.
29. Jokhio AH, Winter HR, Cheng KK. An Intervention Involving Traditional Birth Attendants and Perinatal and Maternal Mortality in Pakistan. *N Engl J Med*. 2005;352(20):2091–2099.
30. Memon ZA, Khan GN, Soofi SB, Baig IY, Bhutta ZA. Impact of a Community-based Perinatal and Newborn Preventive Care Package on Perinatal and Neonatal Mortality in a Remote Mountainous District in Northern Pakistan. 2015;15.