



The effect of training program on midwives practice concerning timely management of postpartum Hemorrhage at Aljenena town Dafur

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Abstracts

Background: Post-partum hemorrhage is one of the most alarming and serious emergencies which midwives face when hemorrhage occurs ,her prompt and competent action will be crucial in controlling blood loss and reducing the risk of maternal morbidity or even death. The midwife plays central role in prevention and treatment of postpartum hemorrhage

Design: A quazi- experimental pre-posttest Setting

Objective: To evaluate effect of training program on midwives practice concerning management of postpartum Hemorrhage

Methods: A total coverage of 86 village and hospital midwives in Aljenena town, observational check list planning and developing program used to collect data. Data were analyzed by using statistical package for social sciences.

Result: Results show that midwives' performance regarding insert tow bore cannula was unsatisfactory in pretest (7%) while in post (86%), midwives had poor score of practice related to resuscitate and ABC in the pretest (93%), which was significantly improved in posttest (100%) with a highly statistical significant differences($P < 0.00$) and (96.5%) of midwives had poor score of practice related to call for help, while these percentages changed to (100%) in the post test.

Conclusion: Based on the findings study concluded that the most of midwives were lacked of the essential skills regarding PPH before intervention, while significant change was observed after program

Key word: training – midwives- postpartum- hemorrhage

Introduction

Background: Every year it is estimated that worldwide, more than 500 000 women die of complications of pregnancy and childbirth. At least 7 million women who survive childbirth suffer serious health problems and a further 50 million women suffer adverse health cost after childbirth. The overall majority of these deaths and complications occur in developing countries (Adenifu et al., 2010) Postpartum hemorrhage is one of the most alarming and serious emergencies which midwives face when hemorrhage occurs ,her prompt and competent action will be crucial in controlling blood loss and

reducing the risk of maternal morbidity or even death.

The midwife plays central role in prevention and treatment of postpartum hemorrhage. The midwife as responsible and accountable professional who works in partnership with women to give the necessary support, care and advice during pregnancy, labour and the postpartum period, to conduct births and provide care for the newborn and infant. Midwives provide an essential role in ensuring safe maternity care and their presence at a birth is key, but their skills and abilities are more important that may need advance lab skill for training (Mutete, 2013).

The postpartum hemorrhage (PPH) is an obstetric emergency associated with both the vaginal birth and cesarean section. PPH are the leading causes of maternal morbidity and mortality in developing countries. Bleeding is the main cause of maternal death in Africa and Asia and second cause in Latin America and in the Caribbean. Globally, 35% of maternal deaths are associated with PPH (Walker et al., 2013). World Health Organization (WHO) defines PPH as 500 ml of blood loss after vaginal birth and 1000 ml of blood loss in case of cesarean births. The primary hemorrhage is bleeding that occurs during the first 24 hours after delivery. When this occurs after 24 hours of birth until six weeks it is called secondary postpartum hemorrhage (WHO, 2012). Around 80% of women's deaths occur due to primary hemorrhage which is associated with excessive bleeding in the early 24 hours after child birth. Uterine atony is the main cause of primary hemorrhage. Other causes are retained placenta, birth canal lacerations or perineum, uterine rupture, uterine inversion, and coagulation disorders (Knight, 2015). The active management of the third stage of labor involves interventions expulsion of the placenta and the uterine contraction with the intention of preventing or reducing blood loss. The interventions include use of Utero tonic, controlled cord traction and uterine massage. Other interventions related to prevention of postpartum hemorrhage are as skin-to-skin contact, breastfeeding, early cord clamping time it was therefore necessary to identify and better nursing practices used for prevention and control of PPH (Sheiner, 2005).

Problem Statement:

Postpartum hemorrhage is the major cause of maternal morbidity and mortality with the highest incidence in developing countries, obstetric hemorrhage causes 127,000 deaths worldwide and is the leading cause of maternal mortality (Sheiner, 2005 and, Fawcus, 2010). Globally, obstetric hemorrhage remains the most significant cause of maternal mortality. It is estimated that PPH is the most common cause of maternal deaths across the world, morbidity. the four main causes of

postpartum hemorrhage are uterine atony (70%), trauma (20%), retained tissue (10%), and coagulopathy (1%). stated that the risk factors of postpartum hemorrhage include-mismanagement of third stage of labor, prolonged labor or augmented labor, pre-eclampsia, postpartum hemorrhage in previous delivery, multiple gestations, multiparty, pregnancy induced hypertension, Abruptio placenta, chorioamnionitis, instrumental delivery, caesarean section, placenta praevia, and absence of prenatal care. (Leduc et.al, 2015).In Sudan the percentage of PPH is 72%, APH 20% and intrapartum hemorrhage 8 % (International Confederation of Midwives; 2004 and Bij de Vaate, 2010)

Justification

Prevention and management of PPH is crucial to averting this reality in an effort to achieve the millennium development goal number five of improving maternal health, this can be achieved if the midwives have the knowledge and skills required to prevent and manage PPH if it occurs. Midwives independently manage the ante partum, intrapartum, postpartum, and gynecological care of essentially normal women and their normal newborns. Midwife is the primary care giver and co-ordinates the activities of the various paramedical personnel. Shortage of skilled staff for emergency obstetric care and multi-tasking which affected the quality of care. The training program improve capacity of midwives to treat obstetric emergency and undertake neonatal resuscitation through maternal and neonatal health Centre and develop the skills necessary to be the future leaders of positive change. Home birth deliveries are often in high demand, however it requires the skills and confidence of community midwives to not only deliver babies independently in such a setting, but to recognize early on it the requires medical attendance or intervention. The midwives are selected because they are considered as part of community leader to whom the women usually referred to them and ask a lot of information concerning maternal wellbeing.

Objectives

General objective

To evaluate the effect of training program on midwives practice concerning management of postpartum Hemorrhage

Specific objectives

To identify the current practice of midwives on postpartum Hemorrhage management.

To train of the midwives to manage Standardized postpartum Hemorrhage.

To evaluate the effect of educational Program after training.

Methodology

Study design:

A quasi- experimental pre-posttest –to evaluate the effect of training program on midwives' practice regarding Management of postpartum Hemorrhage.

Study area:

Aljenena town – located in West Darfur, bounded from north by serba locality ,from south by Baeda locality ,from east by keriding ,from west by chad .The number of population 408,052 working in farmer,husbander and trade ,which is contains 3 hospital,27 health center 17 Family Health Unit,1 Faculty of Medicine,1 Health Academy school, and 1 Midwifery School the number of health care provider 175 Midwives, 212 Nurses, 11 Medical Doctor, and 23Specialists

Study sitting:

Aljenena king hospital established in 1942 it has four department. Medicine, Sugary, Pediatrics and obstetrics and gynecology. In 2007 it become teaching hospital for training to medical and para medical students. Department of orthopedic, derma, dental and diagnostic x ray was add later.

obstetrics and gynecological department which include 60 bed The total number of consultant 8, registrar 5 midwives per shift 5 average number of delivery 13 P/D 8 normal viganal delivery and 5 cesarean section

Study population:

Village and hospital mid wives

Village midwife:

She is secondary school leaver who

attended a 9-12 months course in Village Midwifery School. She is well trained on birth attending, detection of at risk for referral, and PHC especially health education of the community on reproductive health.

Hospital midwife:

This cadre is primary nurse she attend a one year course in Midwifery to be nurse mid wife that work in hospital labour room.

Inclusion criteria:

All registered village and hospital midwives in Aljenena town willing to participate.

Exclusion criteria:

Midwives not working in Aljenena. Community midwife
Traditional birth attending midwife .
Refused to participate.

Sample size:

Total coverage (86) village and Hospital midwives in Aljenena town willing to participate during of the study period.

Data Collection Tool

Data were collected by using two tools; observation chick list and planning and developing of the program

First Tool

Observation chic list was constructed to asses' midwives 'practice which include: One part:

It consists of 16 procedure related to midwives practice regarding postpartum Hemorrhage e.g.

(.Place women in comfort position Resuscitate, ABC' Call for help' Insert two bore cannula' sample for Blood profile' IV fluid' Check of complete placenta' Fundal massage and manual compression' Administration utrotonic agents' Viginal examination' Blood transfusion' Monitor VS every 5 minutes' Psychological support' Don't leave women alone and Documentation')

Each mid wife was evaluated after 3months.

The skills of midwives were evaluated collected by the clinical supervisors by using checklist in the field.

Second tool

Planning and developing of the program which consists of three phases as following:

Phase I: Assessment phase

During this phase an official approval was obtained to conduct the study. The researcher explains the purpose of the study and obtained verbal consent from each midwife. All midwives were interviewed to collect data related to socio demographic characteristics and assess current practice which covered by the program such as (, ABC’ Call for help’ Insert two bore cannula’ the midwives divided into two groups; every group takes one week. The program implemented through sample for Blood profile’ IV fluid’ Check of complete placenta’ Fundal massage and manual compression’ Administration utrotonic agents’ Virginal examination’ Blood transfusion’ Monitor VS every 5 minutes

Phase II: Implementation

In this phase 7hours practical for each group. Guidelines were given to the

midwives and explained through power point lectures and phone numbers were taken to make follow up with them.

Phase III: Evaluation Post-test of the guidelines was done using the same pre-test tool. After 3months to evaluate the practice of midwives.

Data Analysis

Data Analysis by computer SPSS program.

Ethical consideration:

Approval from IRB Alneelain University
 Permission from ministry of health west Darfur

Permission from Aljenena hospital.

consent from participant verbally or written before the data collection explain the objective of the study clearly to all participants were informed that they had the option to accept or decline to participate in the study knowledge in posttest was improved.

Table (1): Distribution of studied sample according to types of midwives) (n = 86).

	Types of midwives	N	Mean	Std. Deviation	P value
Practice pre	Village midwives	30	16.0000	.00000	0.422
	Hospital midwives	56	16.0000	.00000	
Practice post	Village midwives	30	27.4000	. 4.53036	
	Hospital midwives	56	26.7857	2.54926.	

Result: Table (2): Distribution of studied sample according to midwife practice (n = 86).

Items	Pre test		Post test		P value
	Done Freq. (%)	Not done Freq. (%)	Done Freq. (%)	Not done Freq.(%)	
Place women in comfort position	54 (62.8)	32(37.2)	86 (100)		0.000
Resuscitate , ABC	6(7)	80(93)	86 (100)		0.000
Call for help	3(3.5)	83(96.5)	86 (100)		0.000
Wear sterile gloves	66(76.7)	20(23.3)	86 (100)		0.000
Insert tow bore cannula	6(7)	80(93)	86 (100)		0.000
sample for Blood profile	12(14)	74(86)	86 (100)		0.000
IV fluid	36(41.9)	50(58.1)	86 (100)		0.000
Check of complete placenta	57(66.3)	29(33.7)	86 (100)		0.000
Fundal massage and manual compression	66(76.7)	20(23.3)	86 (100)		0.000
Administration utrotonic agents	33(38.4)	53(61.6)	86 (100)		0.000
Virginal examination	62(72.1)	18(20.9)	86 (100)		0.000
Blood transfusion	6(7)	80(93)	86 (100)		0.000

Monitor VS every 5 minutes	3(3.5)	83(96.5)	86 (100)		0.000
Psychological support	9(10.5)	77(89.5)	86 (100)		0.000
Don't leave women alone	56(65.1)	30(34.9)	86 (100)		0.000
Documentation	9(10.5)	77(89.5)	86 (100)		0.000

Discussion:

Postpartum hemorrhage (PPH) is a common and potentially life-threatening obstetric emergency associated with both the vaginal birth and cesarean section. Indeed PPH is the leading causes of maternal morbidity and mortality in worldwide. Globally, from the result as regards the effects of training program among study midwives, clear up there was a highly statistical significant differences between mean practice of village midwives and hospital midwives before and after intervention with Std. Deviation. 4.53036 For village midwives and 2.54926 Std. Deviation for hospital midwives in post-practice.

Performance regarding wearing sterile gloves was unsatisfactory before attending the training program, this result may be due to the fact that, midwives' not attend training course about PPE.

Midwives' performance regarding, insert two bore cannula was unsatisfactory in pretest (7%) while in post (86%). This result is in accordance with (Bogne V et.al,(2014) who reported that training program reflects significantly higher performance in both village midwives and Hospital midwives and lack skill on insert two bore cannula is identified.

Concerning Call for help and resuscitate , ABC all study group demonstrate higher performance after intervention, this results indicates that midwives never attends resuscitation training including basic life supports, the program help the be more engaged, experience a deeper learning and have unique opportunities to be able to apply the acquired knowledge into the clinical practice, develop technical clinical skills, a holistic behaviors approach, and, increased awareness of patient needs and

more empowered to advocate for their patients. This results is in line with (Sandeep S. et al, 2014) who reported that before postpartum hemorrhage training a poor communication between different professionals were identified Management PPH.

Conclusion: Based on the findings study concluded that the majority of midwives were poor practice regarding management of PPH and improved the practice in the post-test compared with pre-test and they demonstrated good practice which indicated.

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References

Adenifuja,K.O, Adepiti, C.A, & Ogunniyi, S.O. (2010). Postpartum Haemorrhage in a teachingl hospital in Nigeria.

Mutete.E. 2013.competence of midwives in prevention and management of post-partum hemorrhage at Kiambu district hospital labour ward, Kiambu country H56/6782.

Walker, L. J., Fetherston, C. M. & McMurray, A. 2013. Perceived changes in the knowledge

and confidence of doctors and midwives to manage obstetric emergencies following completion of an Advanced Life Support in Obstetrics course in Australia. The Australian & New Zealand *Journal of Obstetrics & Gynaecology*, 53(6):525–531. <http://dx.doi.org/10.1111/ajo.12110>.
World Health Organization. 2012. WHO recommendations for the prevention and treatment of postpartum hemorrhage [Internet]. Geneva: WHO; [cited 2015 Aug 20]. Available from: http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/9789241548502/en
Knight M., Callaghan W.M., Berg C., Alexander S., Bouvier-Colle M.H., Ford J., Joseph K.S., Lewis G., Liston R.M., Roberts C.L., Oats J and Walker J. 2015. Trends in postpartum hemorrhage in high resource countries: a review and recommendations from the International Postpartum Hemorrhage Collaborative Group. *BMC Pregnancy Childbirth* [Internet]. 2009 Nov [cited Aug 20]; 9(1):55. Available from: <http://www.biomedcentral.com/1471-2393/9/5>
Fawcus, S. 2010. Prevention of postpartum hemorrhage (PPH) and deaths from PPH: Review. *Obstetrics and Gynaecology Forum*, 20(3):81–83
Sheiner E., Sarid L., Levy A., Seidman D.S., Hallak M. 2005. Obstetric risk factors and outcome of pregnancies complicated with early postpartum hemorrhage: a population-based study. *J Matern Fetal Neonatal Med*. 18(3):149-54
Fawcus, S. 2010. Overview of postpartum haemorrhage as a global problem and in South Africa. *Obstetrics and Gynaecology Forum*, 20(3):77–79
Leduc D., Senikas V., Lalonde A.B., Ballerman C., Biringer A., Delaney M., Duperron L., Girard J., Jones D., Lee L.S., Shepherd D. and Wilson K. 2015. Active management of the third stage of labour: prevention and treatment of postpartum

hemorrhage. *J Obstet Gynaecol Can* [Internet]. 2009 Oct 1 [cited Jun 20];31(10):980–93. Available from: <http://europepmc.org/abstract/med/19941729>
International Confederation of Midwives; 2004. International Federation of Gynaecologists and Obstetricians. Joint statement: management of the third stage of labour to prevent post-partum haemorrhage. *J Midwifery Womens Health*. Jan-Feb;49(1):76-7
Bij de Vaate A., Coleman R., Manneh H., Walraven G. 2010. Knowledge, attitudes and practices of trained traditional birth attendants in the Gambia in the prevention, recognition and management of postpartum haemorrhage. *Midwifery* [Internet]. 2002 Mar [cited 2015 Jul 8];18(1):3-11. Available from: <http://www.sciencedirect.com>
12-Fawcus, S.. Overview of postpartum haemorrhage as a global problem and in South Africa. *Obstetrics and Gynaecology Forum*, 20(3):77–79
Fawcus, S. 2010 b. Prevention of postpartum haemorrhage (PPH) and deaths from PPH: Review. *Obstetrics and Gynaecology Forum*, 20(3):81–83.
Tsu V. D., Mai T. T. P., Nguyen Y. H., Luu H. T. T. 2015. Reducing postpartum hemorrhage in Vietnam: assessing the effectiveness of active management of third-stage labor. *J Obstet Gynaecol Res* [Internet]. 2006 Oct [cited Aug 20]; 32 (5): 489–96. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/16984516>
Walker, L. J., Fetherston, C. M. & McMurray, A. 2013. Perceived changes in the knowledge and confidence of doctors and midwives to manage obstetric emergencies following completion of an Advanced Life Support in Obstetrics course in Australia. The Australian & New Zealand *Journal of Obstetrics & Gynaecology*, 53(6):525–531. <http://dx.doi.org/10.1111/ajo.12110>

Bogne V., Kirkpatrick C., Englert Y. 2014
.Simulation training in the management of
obstetric emergencies. A review of the
iterature. Revue Medicale de
Bruxelles.;35(6):491–98.

Sandeep S, Indu L. 2014. Simulation
training in the management of obstetric
emergencies. A review of the literature.
Rev Med Brux. 2 Nov-Dec;35(6):491-8.