

Original Article

The Effect of Training Program on Midwife's Knowledge regarding Postpartum Hemorrhage at Aljenena town /Darfur 2020

Nafisa Ibrahim Abdelgadir¹ and Sara Lavinia Brair²

1· Assistant professor, Faculty of Nursing Science, University of Bahry

2. Assistant professor Faculty of Medicine .Al Neelain University

Abstract

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 Post-partum hemorrhage is one of the most alarming and serious emergencies which midwives face when hemorrhage occurs. The midwife plays central role in prevention and treatment of postpartum hemorrhage. Home birth deliveries are often in high demand, it requires the skills and confidence not only deliver babies, but to recognize early medical attendance or intervention. **The aim is** to assess the effect of training program on midwives' knowledge regarding of postpartum Hemorrhage **Methods:** A total coverage of village and hospital midwives in Aljenena town. Sample size consist of (86) midwives data were collected using structured interviewing questionnaire. Data were analyzed by using statistical package for social sciences **Result:** showed that tow third of midwives had poor knowledge about the causes of post-partum hemorrhage before intervention while their knowledge improved after intervention and more than forty of midwives had poor knowledge regarding risk factor of post-partum hemorrhage in pretest, while these changed to good knowledge in the posttest with highly statistical significant differences $p=0.000$. Less than tow third of midwives had poor knowledge about preventions of post-partum hemorrhage) before intervention. While, their knowledge improved after intervention.

Conclusion: Based on the findings study concluded that the majority of midwives were lacked of the essential knowledge regarding PPH

in pretest while knowledge improved after intervention.

Key word: midwifery training, postpartum hemorrhage

Introduction

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 [7, 8] 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 [4]. PPH defines 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 [1, 2]. 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 a tony is the main cause of primary hemorrhage. Other causes are retained placenta, birth canal lacerations or perineum, uterine rupture, uterine inversion, and coagulation disorders [3, 4]. Postpartum hemorrhage is one of the most alarming and serious emergencies which

midwife face when hemorrhage occurs ,her quick 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. 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 more important that my need advance [5,6]. 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 [7,8,9]. 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, multiparity, pregnancy induced hypertension, Abruptio placenta, chorioamnionitis, instrumental delivery, caesarean section, placenta praevia, and absence of prenatal care. (10) .In Sudan the percentage of PPH is 72%, APH 20% and intrapartum hemorrhage 8 % [11, 12].

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. The training program clearly aimed to assist health policy objective of reducing adverse clinical events in maternity services and should be explored further as method of improving performance in the management of life threatening emergencies. 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 improvement in training has led to increased confidence among midwives and improved team working. Professionally trained midwives have been a key to success .they play an essential role in achieving the goal to reduce maternal and new born mortality. 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.

The study is to assess the effect of training program on midwives' knowledge regarding postpartum hemorrhage.

.Methodology

Study design: A quasi- experimental pre-posttest –to evaluate the effect of training program on midwives' knowledge 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 setting: Aljenena king hospital established in 1942 it has four department. Medicine, Sugary, Pediatrics and obstetrics and gynecological which include 60 bed. In 2007 it become teaching hospital for training department of orthopedic, derma , dental and diagnostic x ray was add later. The total number of consultant 8, registrar 5 midwives per shift 5 average number of delivery 11 P/D

Study population: Village and hospital midwives .Village midwife: This 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 work in hospital labour room

Inclusion criteria: All registered village and hospital midwives in Aljenena town.

Exclusion criteria: Those midwives not working in Aljenena. Community midwife. Traditional birth attending midwife

Sample size: total coverage (86) village and Hospital midwife

Tools of data collection Data were collected by using two tools; structured interview questionnaire and Planning and developing of the program

First Tool Structured interview questionnaire was constructed to asses' midwives' knowledge which include two parts Part one: socio-demographic

characteristics.eg (Age, Level of Education, and years of Experience) Part two: It consists of 12 items containing questions related to midwives 'knowledge regarding postpartum Hemorrhage e.g. (definition 'classification, type sing and symptoms of postpartum hemorrhage, risk factors of postpartum hemorrhage, and complication of postpartum hemorrhage)

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 a written or verbal consent from each midwife. All midwives were interviewed to collect data related to socio demographic Characteristics and information which covered by the program such as (cause, type, classification, and sign and symptoms)

Phase II: Implementation In this phase the midwives divided into two groups; every group takes one week. The program implemented through 16 hours theory. 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 the knowledge of midwives were evaluated

Data Analysis: Data Analysis by computer SPSS program.

Ethical consideration: IRB approval. Permission from ministry of health Permission from hospital. The researcher explains the purpose of the study and obtained a verbal consent from each midwife before the data collection the research explain the objective of the study clearly to all participants, they had option to accept or decline to participate.

Results

Table (1): knowledge about classifications of post-partum hemorrhage n = 86.

		Frequency	Percent	P value
Pre test	Poor knowledge	57	66.3	0.000
	Good knowledge	23	26.7	
	Very Good knowledge	6	8	
	Excellent	0	0	
Post test	Poor knowledge	0	0	
	Good knowledge	18	20.9	
	Very Good knowledge	53	61.6	
	Excellent	15	17.4	

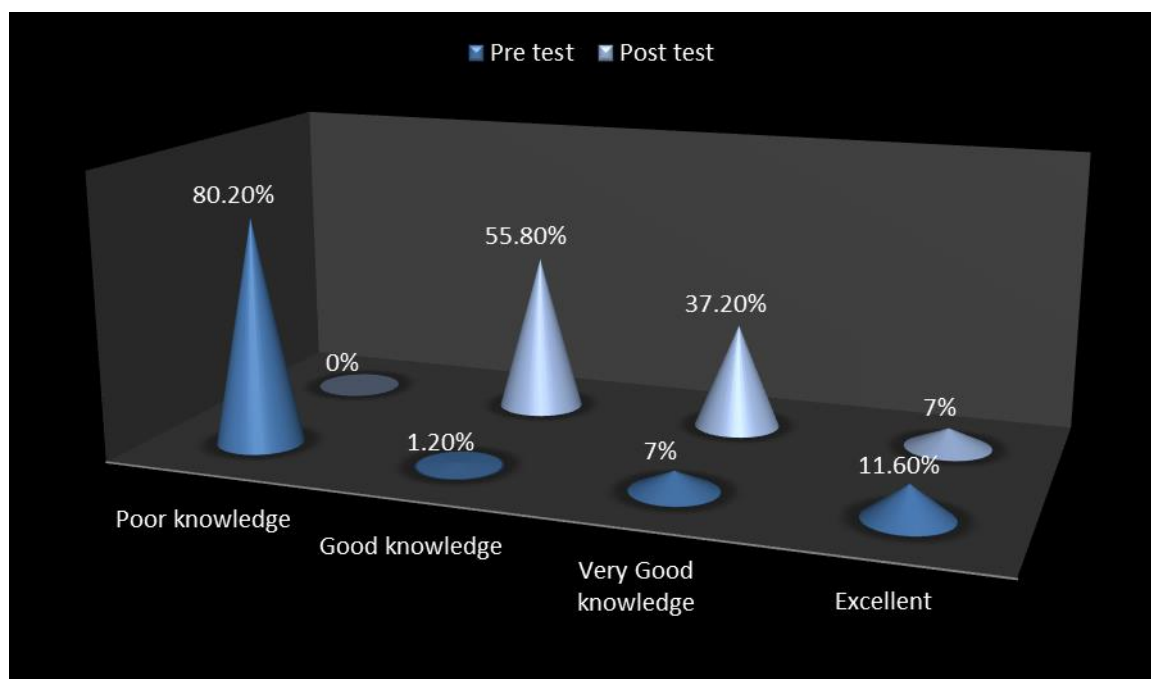


Figure (1): knowledge about the risk factor of post-partum hemorrhage during intrapartum period n = 86

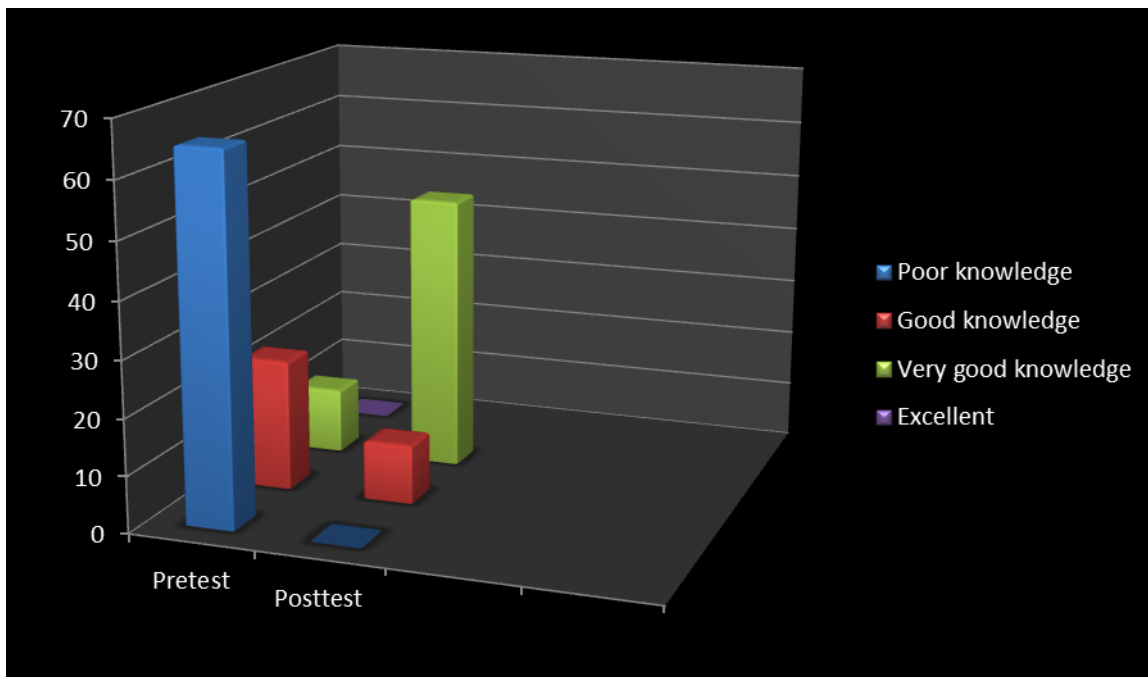


Figure (2): knowledge about the signs and symptoms of post-partum hemorrhage n = 86.

Table (2): knowledge about the causes of post-partum hemorrhage n = 86

		Frequency	Percent	P value
Pre test	Poor knowledge	57	66.3	0.000
	Good knowledge	23	26.7	
	Very Good knowledge	6	8	
	Excellent	0	0	
Post test	Poor knowledge	0	0	
	Good knowledge	18	20.9	
	Very Good knowledge	53	61.6	
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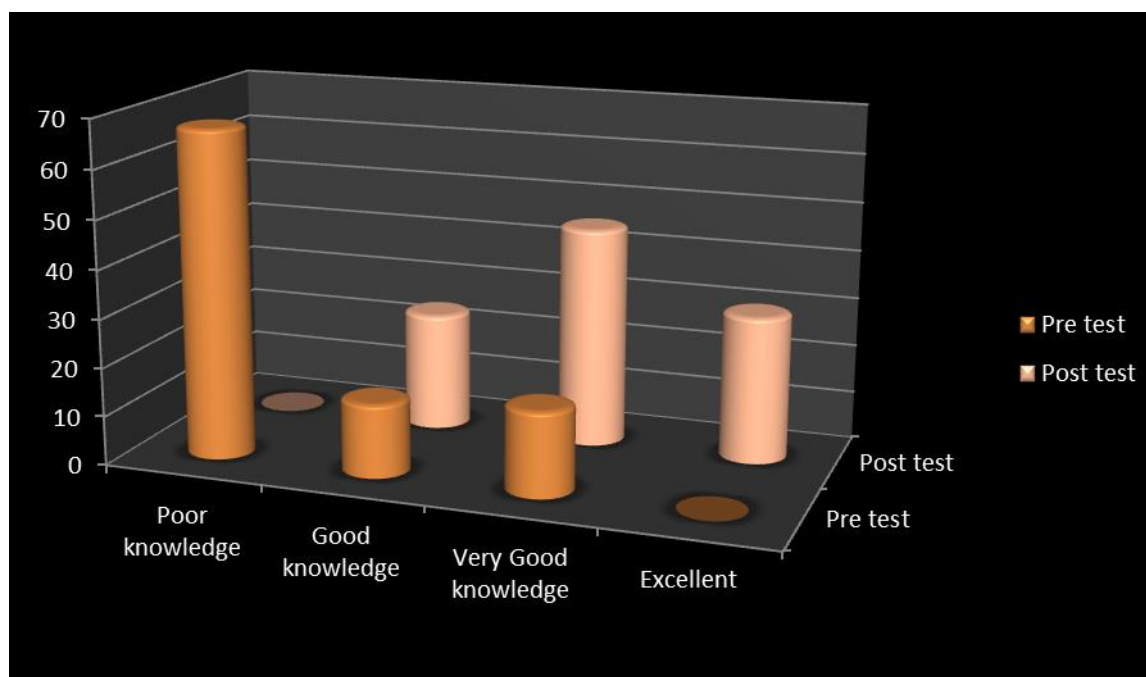


Figure (3): knowledge about the complications of post-partum hemorrhage n = 86.

Discussion:

Postpartum hemorrhage (PPH) is the most common form of major obstetric hemorrhage. Lack of early intervention and lack of adequate training are main factors leading to maternal mortality and morbidity. ⁽⁶⁾

The current study stated that nearly tow third of participant had poor score of knowledge about classifications of post-partum hemorrhage before intervention, while these percentage change to twenty post intervention, this could suggest that midwives do not have relevant information, which may call for a review of the midwifery curricula. These findings are similar to what mentioned by (Fahmy, H). ⁽⁴⁾

Findings of the current study revealed that majority of studied midwives had poor score of knowledge about the risk factor of post-partum hemorrhage during intarpartum in pretest. However, more than half of them scored good knowledge in the post test after intervention, this might suggest that natal area give low priorities identification of such risk factors allows for planning to ensure necessary resources and personnel are

available at time of delivery. These findings are contradictory with the studies which done by Sheldon, et.al, they stated that majority of studied midwives had poor knowledge about the risk factor of post-partum hemorrhage in posttest. ⁽⁷⁾

Findings of the current research revealed that nearly tow third of midwives had poor score of knowledge about the signs and symptoms of post-partum hemorrhage before intervention, while nearly half of them scored very good knowledge after intervention there was significant improvement of the studied midwives knowledge after the implementation compared with before intervention, this might indicate that there were lack of guidance and limited information that currently exists among midwives PPH is one of the most alarming and serious emergencies, midwives may face first and may be the only professional person when hemorrhage occurs, her prompt and competent action will be crucial in crucial in controlling blood loss reducing the risk of maternal morbidity or even death. This finding is supported by study carried by

(Rueda, et. al) they stated that half of midwives had good knowledge in posttest.⁽¹³⁾ The present study stated that less than tow third of midwives had poor knowledge about causes of post-partum hemorrhage before intervention while their knowledge significantly improved after intervention, this limited knowledge among midwives may suggest the need to review the current pre-service curricula to assess how adequately it prepares midwife with skills in various obstetric care.

Findings of this study indicated that more than tow third of informant had poor knowledge about complication of post-partum hemorrhage in pretest. However, more than forty of them scored very good knowledge after program .This might be referred to midwife is not exposed to this kind of information, which indicates the need to improve systems for supervising and providing refresher a review of the midwifery curricula to improve midwife's knowledge and skills.⁽²⁰⁾

Conclusion: Based on the findings study concluded that the majority of midwives were lacked of the essential knowledge regarding PPH. Midwives had high knowledge score in the post-test compared with pre-test and they demonstrated good practice which indicated that the PPH training program was effective

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References.

1. Adenifuja,K.O, Adepiti, C.A, &Ogunniyi, S.O. Postpartum Haemorrhage in a teaching1 hospital in Nigeria. (2010).
2. Mutete.E.competence of midwives in prevention and management of postpartum hemorrhage at Kiambu district hospital labour ward, Kiambu countryH56/6782/2013
3. Walker, L. J., Fetherston, C. M. & McMurray, A. 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, 2013.53(6):525–531. <http://dx.doi.org/10.1111/ajo.12110>
4. Fatina, R. “Midwives’ competency for implementation of active management of third stage of labor”, Muhimbili University of Health and Allied Sciences .Assessment of care in one of the training institute”. Nepal Journal of Obstetrics and Gynaecology. (2011) 1(2):28-30.
5. -World Health Organization. WHO recommendations for the prevention and treatment of postpartum haemorrhage [Internet]. Geneve: WHO; [cited2015Aug20].Availablefrom:http://www.who.int/reproductivehealth/publications/maternal_perinatal_health.2012./9789241548502/en
6. -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. 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 2015 Aug 20];9(1):55. Available from:<http://www.biomedcentral.com/1471-2393/9/5>

7. Fawcus, S. Prevention of postpartum haemorrhage (PPH) and deaths from PPH: Review. *Obstetrics and Gynaecology* 2010b,Forum,20(3):81–8

8. Sheldon WR, Blum J, Vogel JP, Souza JP, Gu'Imezoglu AM, Winikoff B; WHO Multicountry Survey on Maternal and Newborn Health Research Network. Postpartum haemorrhage management, risks, and maternal outcomes: findings from the World Health Organization Multicountry Survey on Maternal and Newborn Health. *BJOG* 2014; 121(Suppl 1):5–13.

9. 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. Active management of the third stage of labour: prevention and treatment of postpartum hemorrhage. *J ObstetGynaecol Can* [Internet]. 2009 Oct 1 [cited 2015 Jun 20];31(10):980–93. Available from: <http://europepmc.org/abstract/med/19941729>

10. International Confederation of Midwives; International Federation of Gynaecologists and Obstetricians. Joint statement: management of the third stage of labour to prevent post-partum haemorrhage. *J Midwifery Womens Health*. 2004Jan-Feb;49(1):76-7

11. Bij de Vaate A., Coleman R., Manneh H., Walraven G. 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>

12. Fawcus, S. a. Overview of postpartum haemorrhage as a global problem and in

South Africa. *Obstetrics and Gynaecology Forum*, 2010,20(3):77–79

13. Fawcus, S.. Prevention of postpartum haemorrhage (PPH) and deaths from PPH: Review. *Obstetrics and Gynaecology Forum*,2010, 20(3):81– 83.

14. Tsu V. D., Mai T. T. P., Nguyen Y. H., Luu H. T. T. Reducing postpartum hemorrhage in Vietnam: assessing the effectiveness of active management of third-stage labor. *J ObstetGynaecol Res* [Internet]. 2006 Oct 32 (5):489–96. 25-

15. Rueda, et. al .Overview of postpartum hemorrhage. Retrieved on October 10, 2017 from <https://www.uptodate.com/contents/overview-ofpostpartum-hemorrhage>.

16. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/169845>

16 15-Walker, L. J., Fetherston, C. M. & McMurray, A.. Perceived changes in the knowledge and confidence of doctors and midwives to manageobstetricemergenciesfollowingcompletionofanAdvancedLife Support in Obstetrics course in Australia. *The Australian & New Zealand Journal of Obstetrics &Gynaecology*, 2013,53(6):525–531.

<http://dx.doi.org/10.1111/ajo.12110>

17. -Onasoga, O A.1, Awhanaa, A, Amiegheme. Assessment of knowledge of strategies used in the prevention and management of postpartum haemorrhage by midwives in Bayelsa State, NigeriaArchives of Applied Science Research, 2016, 4(1):447-453.

18. Adenifuja,K.O, Adepiti, C.A, &Ogunniyi, S.O. Postpartum Haemorrhage in a teaching hospital in Nigeria.(2015).

19. Federal Ministry of Health. General Director of primary Health, Mother and child Health directorate. National

reproductive Health Program. The national maternal Death Review Report 2015.

20. Oyetunde, M.O &Nkwonta, C.A. Quality issues in midwifery: a critical analysis of midwifery in Nigeria within the context of International Confederation of Midwives 2014

21. WHO. Recommendations for the Prevention of Postpartum

Haemorrhage. Geneva: WHO;2007. p. 14–16. www.patient.co.uk > Professional Reference.

22. Ngwenya, S. Postpartum hemorrhage: incidence, risk factors, and outcomes in a lowresourcesetting. *Journal of Women's Health* 2016 (8):647-650.Doi:10.2147/IJWH.S119232.