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Archives of Applied Science Research, 2012, 4 (1):447-453
(http://scholarsresearchlibrary.com/archive.html)

ISSN 0975-508X
CODEN (USA) AASRC9

Assessment of knowledge of strategies used in the prevention and management of postpartum haemorrhage by midwives in Bayelsa State, Nigeria

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ABSTRACT

An estimated 500,000 women die from potentially preventable causes of pregnancy and childbirth each year with up to an estimated quarter of these deaths occurring as a consequence of haemorrhage. The Midwives being the first point of contact play a central role in addressing this global issue. This study was designed to assess the knowledge of strategies used in the prevention and management of postpartum haemorrhage (PPH) by midwives in Bayelsa State Nigeria. A purposive non-probability sampling technique was used to select a sample frame of eighty midwives working in two government hospital, in Bayelsa State Nigeria. Data were collected using a self-developed questionnaire. Descriptive and inferential statistics were used to analyze the data generated with 5% level of significance. The study revealed that majority of the study population (85%) had high level knowledge of strategies used in the prevention and control of PPH and strategies used by early cord clamping, bladder emptying, placing the woman in a trendeleburg position, uterine massage after delivery of the placenta and the use of uterotonics with oxytocin being the most commonly used. Majority of respondents (73.8%) have heard of anti-shock garment but only(52.5%) used it in the management of PPH. There was no significant association between the professional qualification (P-Value=0.349), rank (P-Value=0 .088) of midwives and their level of knowledge of strategies used in the prevention and management of PPH with p>0.05. It is recommended that refresher courses where nurse-midwives and other health care professionals will be trained and retrained on the strategies used in the prevention and management of PPH should be periodically with Emphasis on the use of anti-shock garment.

Key Words: Knowledge, Management, Control, Midwives, Postpartum haemorrhage, Prevention, Strategies.

INTRODUCTION

Worldwide about half a million women die as a result of complications of pregnancy and childbirth. Overwhelming proportions of these deaths occur in developing countries of the world (Adenifuja, Adepiti, & Oguniyi, 2010). Majority of these deaths occur within few hours of delivery and in most cases are due to postpartum haemorrhage (PPH). Postpartum haemorrhage is the major cause of maternal morbidity and mortality worldwide with the highest incidence in developing countries (Adenifuja, et al 2010). According to World Health Organization, (2005) obstetric haemorrhage causes 127,000 deaths worldwide and is the leading cause of maternal mortality. Globally, obstetric haemorrhage remains the most significant cause of maternal mortality. It is estimated that PPH is the most common cause of maternal deaths across the world, responsible for more than 25% of deaths annually and is a significant cause of several maternal morbidity (Homer, Clements, McDonnell, Peek, & Sullivan 2009).

In Nigeria the maternal deaths (59,000) annually rank second to Indian's 117,000 and out of this figure it is estimated that maternal deaths due to postpartum haemorrhage is 20% with 1000 maternal deaths per 100,000 live births. (This Day, 2008)

According to Anderson and Etches (2007), the four main causes of postpartum haemorrhage are uterine atony (70%), trauma (20%), retained tissue (10%), and coagulopathy (1%). Koh, Devendra, & Tan (2009), opined that 75-90% of primary PPH is due to uterine atony and is the leading cause of immediate postpartum haemorrhage. Humaira, Iram, Anisa, & Aziz, (2008), stated that the risk factors of postpartum haemorrhage include- mismanagement of third stage of labor, prolonged labor or augmented labor, pre-eclampsia, postpartum haemorrhage in previous delivery, multiple gestations, multiparity, pregnancy induced hypertension, Abruptio placenta, chorioamnionitis, instrumental delivery, caesarean section, placenta praevia, and absence of prenatal care.

According to Jhpiego (2001), it is difficult to predict who will have PPH based on risk factors because two-thirds of women who have PPH have no risk factors. Therefore, all women are considered at risk and haemorrhage prevention must be incorporated into care provided at every birth. Since midwives is the first point of contact for most women in labour and all pregnant women are at risk of PPH, it is expedient to assess the level of knowledge of strategies used in the prevention and management of PPH by midwives in Bayelsa State, Nigeria.

Objectives

The main objective of this study was to assess the knowledge of strategies used in the prevention and management of postpartum haemorrhage by midwives in Yenagoa local government area, Bayelsa state.

Research Hypotheses

- There is no significant association between the professional qualification of midwives and their knowledge of the strategies used in the prevention and management of PPH.
- There is no significant association between the ranks of midwives and their knowledge of the strategies used in the prevention and management of PPH.

MATERIALS AND METHODS

This is a descriptive non-experimental survey designed conducted in the two government tertiary Hospital in Yenagoa Local Government Area of Bayelsa State Nigeria. The health care institutions provide preventive, promotive, ameliorative and rehabilitative services; and also serve as specialist and referral centre for neighboring communities. The study population consists of all midwives currently working in the selected hospital at the time of the study. This population was chosen because midwives were first point of contact for women during labour and normal labours are managed by midwives. Purposive non-probability sampling technique was used to select a sample frame of eighty midwives working in the selected tertiary hospital in Yenagoa Local Government Area of Bayelsa State Nigeria. The instrument used for data collection was a self structured questionnaire to suit the purpose of the study. Data collected were analyzed and results presented using descriptive statistics in form of percentages and frequency and inferential statistics in form of chi square with level of significance set at 0.05(5%).

RESULTS

TABLE 1: socio - demographic characteristics of respondents

Variables		Frequency	Percentage
Gender	Female	80	100
Qualification	RN/M	55	68.8
	HND	16	20
	BNSc	9	11.3
Ranks	NO II	27	33.8
	NO	16	20
	SNO	9	11.3
	PNO	11	13.8
	ACNO	10	12.5
	CNO	7	8.8

The table 1 above showed that all the respondents 80 (100%) were females. Majority 55(68.8%) of the respondents were registered nurse-midwives, 16(20%) HND holders and 9(11.3%) BNSc holders. Most of the respondents 27(33.8%) were NO II, 16 (20%) were NO I, 9(11.3%) SNO, 11(13.8%) PNO, 10 (12.5) ACNO, and 7(8.8%) were CNOs.

TABLE 2: Age and years of experience of respondents

Variables		Frequency	Percentage %	Minimum	Maximum	Mean	Standard Deviation
Age	22-30	32	40	22	55	34	7
	31-39	31	38.35				
	40-48	12	15				
	49-57	5	6.25				
Years of experience							
	1-7	42	52.5	1	35	9	7
	8-14	22	27.5				
	15-21	12	15				
	22-28	2	2.5				
	29-35	2	2.5				

TABLE 2 showed that 32 (40%) were within the ages of 22-30, 31(38.35%) within the ages of 31-39, 12(15%) were between 40-48 and 5(6.25%) from 49-57 years of age with a minimum age of 22, maximum age of 55, mean of 34 and a standard deviation of 7.

The table also showed 42(52.5%) respondents have had working experience of between 1-7 years, 22(27.5%) 8-14 years, 12(15%) 15-21 years, 2(2.5%) 22-28 years and 2(2.5%) 29-35 years of experience with a minimum age of 1, maximum age of 35, mean of 9 and a standard deviation of 7.

TABLE 3: knowledge of respondents on prevention and control of PPH (n=80)

Variables	Response	Frequency	Percentage
Have you ever managed a patient with PPH?	No Yes	20 60	25.0 75
Does early cord clamping reduce PPH	No Yes	29 51	36.3 63.8
Does delayed cord clamping reduce PPH	Yes No	15 65	18.8 81.3
Bladder emptying during the 3rd stage of labour prevents PPH	No Yes	5 75	6.3 93.8
Do you use uterotonics in the management of PPH	Yes	80	100
If yes, which is commonly used?	Oxytocin Misoprostol Ergometrine	63 1 16	78.8 1.3 20
Placing the woman in a trendeleburg position reduces the risk of PPH	No Yes	30 50	37.5 62.5
Uterine massage after delivery of the placenta prevents PPH	No Yes	4 76	5.0 95.0
Have you ever heard of anti-shock garment?	No Yes	21 59	26.3 73.8
Do you use anti-shock garment for the management of PPH?	No Yes	38 42	47.5 52.5

The table 3 above showed that 60 (75%) of respondents have managed PPH, while 20 (25.0%) of respondents have not managed a patient with PPH. 51(63.8%) of the respondents believed that early cord clamping reduces PPH, while 29 (36.3%) do not. Majority of the respondents 65(81.3%) indicated that delayed cord clamping does not reduce PPH, while 15(18.8%) said it does.75 (93.8%) knew that bladder emptying during the third stage of labour prevents PPH.78 (97.5%) accepted that uterotonics are used in the management of PPH, while 63 (7.8%) noted that oxytocin is the one commonly used,16(20%)respondents noted that Ergometrine is commonly used, and 1 (1.3%) stated that misoprostol is commonly used.

50 (62.5%) knew that placing the woman in a trendeleburg position reduces the risk of PPH, 30(37.5%) did not know. Uterine massage after delivery of the placenta is known by 76(95.0%) to prevent PPH. 59(73.8%) said they have heard about anti-shock garment, 21(26.3%) however said they have not heard. 42(52.5%) knew that it is used for the management of PPH.

TABLE 4: associations between demographic variables and level of knowledge of strategies used in the prevention and management of PPH (n=80)

Variables		Level of knowledge			Pearson Chi-Square X^2 p- valve Df	Remark
		Low knowledge	High knowledge	Total		
Professional qualification	RN/M	10	45	55	X^2 =2.103	No
	HND	2	14	16	P-Value=0.349	significant
	BNsc	0	9	9	Df=2	association
	Total	12	68	80		
Ranks	NO II	8	19	27	X^2 =9.572	No
	NO I	2	14	16	P-Value=0 .088	significant
	SNO	0	9	9	Df=5	association
	PNO	0	11	11		
	ACNO	2	8	10		
	CNO	0	7	7		
	Total	12	68	80		

Table 4 showed that there is no significant association between the professional qualification and rank of respondents and their knowledge of strategies used in the prevention and management of PPH with p>0.05.

DISCUSSION

The study shows that majority of the respondents were between the ages of 22-30, with a minimum age of 22, a maximum age of 55, mean of 34 and standard deviation of 7. This shows that the respondents are in their prime age and may have the knowledge of recent strategies used in the prevention and management of PPH since they may still be receiving training in form of seminar, workshop, in-service training etc. The respondents were all females and majority of them have an experience of 1-7 years, with a minimum year of 1, maximum of 55, mean of 9 and standard deviation of 7 and were NOII.

The findings from the research showed that majority of the respondents had managed PPH and knew the risk factors and strategies used in prevention and control of PPH. The percentage of participants who knew the strategies used in the prevention and management of PPH indicated high level of knowledge. Among the strategies identified in the prevention and management of PPH include; early cord clamping, bladder emptying, placing the woman in a trendeleburg position, uterine massage after delivery of the placenta and the use of uterotonics with oxytocin being the most commonly used. These strategies are in line with documented strategies by Weiss (2011) who stated that uterine massage and having the woman in a trendeleburg position are steps used to treat PPH. Anderson et al (2007) further stated that early cord clamping and cutting; administering a uterotonic drug with or soon after delivery of the anterior shoulder decreases the risk of PPH. The studt revealed that the most commonly used uterotonics in the management of PPH was oxytocin. WHO, FIGO & ICM (2006) recommended that oxytocin (10IU) or misoprostol (400-600 mcg orally) be given by a health worker trained in its use to prevent PPH. Oxytocin, however, is preferred to other uterotonic drugs where its use is feasible. Weiss (2011) highlighted several steps taken to treat PPH, these are uterine massage, placement of the mother in a trendeleburg position, give oxygen.

The majority of respondents have heard of anti-shock garment and indicated that it is used in the management of PPH. Miller, Martin & Morris (2008) stated that anti-shock garment is a first aid device that reverses hypovolaemic shock and decreases obstetric haemorrhage. It shunts blood from the lower parts of the body to the core organs, elevating blood pressure and increasing preload and cardiac output.

Majority of respondents indicated that improper and mismanaged third stage of labour contributes to PPH. According to Anderson et al (2007) the best preventive strategy is active management of the third stage of labor. Hospital guidelines encouraging this practice have resulted in significant reductions in the incidence of massive hemorrhage.

The study further revealed that there is no significant association between the professional qualification, ranks of midwives and their knowledge of strategies used in the prevention and management of PPH.

CONCLUSION

The midwives in the selected tertiary hospital in Bayelsa State Nigeria have high level of knowledge of strategies used in the prevention and management of PPH. The strategies involved in the prevention and management of PPH are clearly documented and midwives must keep abreast with these strategies and implement them in all health care settings in order to reduce the risk of PPH which is a leading cause of maternal morbidity and mortality worldwide.

Recommendations

Based on the findings of this research, the following recommendations were made:

- Refresher courses where nurse-midwives and other health care professional will be trained and retrained on the strategies used in the prevention and management of PPH should be periodically organized.
- Provision and training of midwives in the use of anti-shock garment.

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