International Research Journal of Advanced Engineering and Science
ISSN (online): 2455-9024

Experience of Nurse Midwives and Midwives on the Management of Postpartum Hemorrhage "The Case of CELPA Maternity, in the City of Kinshasa"

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Abstract— *The aim of this study is to explore the experience of nurse midwives and midwives of the CELPA maternity ward on the management of immediate postpartum hemorrhage.It is a qualitative phenomenological study, conducted amongnurse midwives and midwives of the CELPA maternity unit. The survey method and the face-to-face semi-structured interview enabled us to collect the necessary data.After analysis, the results reveal that compared to the experience in the care of postpartum hemorrhage: the care process, they reassure us that they first call for help, keep the giving birth in the recovery room, give the comfortable position, look for the cause and act accordingly, monitor the vital signs. In case management, birth attendants report that they have mastery of postpartum haemorrhage cases, but some of the difficulties that limit them are the lack of blood bank, insufficient staff and unavailability of the laboratory service at night.With regard to improvement strategies and/or Staff expectations: staff formulate expectations which are at the same time improvement strategies. For the maternity, they ask to make relief products available, to increase the number of staff and to the Ministry of Health to set up a blood bank, to supply the maternity with drugs, and to strengthen the capacities of the staff.In view of these results, it is necessary to recruit new staff with an emphasis on midwives in order to strengthen the workforce of the maternity ward.*

Keywords—*Experience, midwifery nurse, midwife, management, postpartum haemorrhage.*

I. INTRODUCTION

Postpartum haemorrhage (PPH) remains the leading cause of maternal mortality in the world (140,000 deaths per year, or one woman every four minutes. Half of the deaths occur within 24 hours of birth, mainly due to excessive bleeding [1].

Despite marked progress in the management of this haemorrhage, it remains a major factor in maternal morbidity and mortality, both in developing countries and in hospitals with cutting-edge medical technology; and it presents clinicians with one of the greatest challenges facing [2].

In France, in population studies, the incidence of PPH is around 5% of deliveries when the measurement of blood loss is imprecise, and around 10% when blood loss is quantified. The incidence of severe PPH is around 2%. Uterine atony is the main cause of PPH. Birth canal wounds are responsible for approximately 1 in 5 cases of PPH, and their contribution is greater among severe PPH. Maternal mortality from obstetric hemorrhage has decreased in France (currently 1.6 deaths/100,000 live births), but it remains the leading cause of maternal death (16%) and the most preventable (80%). In developed countries, PPH is the leading cause of severe maternal morbidity. In addition to the direct consequences of acute hypovolemia, it exposes the woman to complications of transfusion, resuscitation, and infertility in the event of hysterectomy. The main risk factors for PPH are factors of uterine atony, but overall they are not very predictive. The risk of recurrence during a subsequent delivery is increased (multiplied by 3), and increases with the number of PPH [3].

Particular attention must be paid to the risk factors corresponding to elements of management of labor or delivery because they are potentially modifiable (professional agreement). In particular, a dose-dependent association between the administration of oxytocin during labor and the occurrence of PPH has been reported; this result should be taken into account in the assessment of the risk-benefit balance of this intervention, intended to avoid the use [3].

830 women die every day from complications of pregnancy and childbirth. Postpartum hemorrhage (PPH) is the leading cause of maternal death, with almost all maternal deaths (99%) occurring in low- and middle-income countries [4].

Rose Mujinga Ntumba, Valentin Boya Bwembola, Blanchard Kibimombo Mopezo, Ernest Kamayi Mulumba, Jeannot Nkumbi Malu, Jean Marie Emongo Laama, Vincente Esamboy Apandjo, Guy Mukendi Kalonji, Astrid Kabanga Kashala, Flavie Baza Flavie, Gervais Kayembe Mutondo, Augustin Kadiata Bukasa[6], "Experience of nurse midwives and midwives on the management of postpartum hemorrhage "the case of CELPA Maternity, in the city of Kinshasa"," *International Research Journal of Advanced Engineering and Science*, Volume 7, Issue 2, pp. 135-139, 2022.

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ISSN (online): 2455-9024

Despite the other causes that underlie maternal mortality, such as infections, hypertensive disorders including eclampsia; labor dystocia; and abortion complications, haemorrhage is the leading direct cause of maternal mortality in West Africa [5], along with abortion complications. It is responsible for 17% of these deaths in this region, which represents around 11,990 maternal deaths per year. Almost two-thirds of these deaths occur during the postpartum period [6].

It is an obstetric emergency. It can be prevented and treated by following guidelines based on scientific evidence and national and international expert consensus. If treatment is ineffective, death can occur within two hours.

The challenge for low-resource countries, and especially those in West Africa, is to implement these treatments in a timely manner. Various factors can influence the delays in the treatment of PPH in this region. A significant number of women give birth outside of health facilities, especially in rural areas [7].

The risk of delay in diagnosis is therefore very high. Then, the lack of transport as well as the bad state of the roads and the often very important distances, are also at the origin of the delays in the assumption of responsibility. Women may arrive at a health facility in a moribund state and too late to receive life-saving emergency care. However, the majority of women die in [8] maternity hospitals.

In addition, some studies conducted in Cameroon show that the prevalence of PPH is 4.1%. The incidence of PPH is estimated at 13.9%. Some risk factors found are age < 20 years (OR= 2.26 95%CI 0.6-7.6; P=0.16); rural women (OR= 2.46 95%CI 0.4-13.4; P= 0.21); immediate history of PPH (OR= 1.6 95%CI 0.3-2.7; P= 0.55); history of abortion (OR=1.04 95%CI 0.3-2.7; P=0.5) and perineal tear (OR=1.51 95%CI 0.64- 3.5; P=0.22); high blood pressure in pregnancy (OR=2.7 95%CI 0.6-11.0; P=0.15). stimulation of labor (OR=1.96 95%CI 0.6-3.1;P=0.2); fever during labor (OR=1.6 95%CI 0.07-4.8;P=0.52); myomatous uterus (OR=1.79 95%CI 1.19-16.8;P=0.4); fetal death in utero (OR=3.1 95%CI 0.8-10.7; P=0.08); and a weight ≥ 3500 grams (OR= 1.15 95%CI 0.4-2.7; P=0.4) [9, 10].

In the Democratic Republic of Congo in the majority of cases, postpartum haemorrhage (HDD) results from a lack or delay in treatment. As a result, for several years, the objective has been to improve the management of hemorrhage and to develop less invasive techniques such as uterine artery embolization (UAE) which do not permanently alter the fertility of these patients. Hence this management must be multidisciplinary and anticipated by organizational procedures within the framework of perinatal networks. Clinical practice recommendations are required and form the basis of this support [10].

Since the quality of hospital care plays an important role in maternal mortality, because most PPH deaths are due to suboptimal care in health facilities and are therefore preventable. Improving the quality of the management of this pathology is a major challenge in our environment. Hence, meeting these midwives and talking with them about their experience of the management of this haemorrhage will not only make it possible to identify the strengths and weaknesses of this management, but on the other hand, an improvement in the organization of health services and the quality of clinical management of PPH, and therefore could contribute to a reduction in maternal mortality.

In view of all the above, we ask ourselves the question: What experience do the midwives of the SELPA maternity unit experience in the management of postpartum hemorrhage?

The purpose of this study is to explore the experience of midwives in the SELPA maternity ward on the management of immediate postpartum hemorrhage.

The following specific objectives have been elucidated to achieve this:

- ✓ Describe the profile of midwives in the SELPA maternity ward;
- ✓ Identify the strengths and weaknesses they encounter in their management of immediate postpartum hemorrhage;
- ✓ Identify the factors underlying the difficulties encountered;
- ✓ Raise their expectations vis-à-vis this care.

II. Material and Methods

2.1 Research estimate

This study is in the field of public health, and more specifically in maternal and child health. This study addresses a qualitative estimate in the phenomenological approach, therefore, we used the naturalistic paradigm with narrative data, subjective and non-quantifiable facts.

2.2. Study Environment

Our study was carried out at the Hospital Center of the Community of Free Pentecostal Churches in Africa (CELPA). The CELPA hospital center is located on avenue Mama Yemo n°64; Munganga district in the commune of Ngaliema in the binza ozone health zone, in the city of Kinshasa.

2.3 Target Population, Sampling and Sample Size

In our study, it is the nurse midwives and midwives of the CELPA maternity ward.

For the realization of this study, we made use of the reasoned non-probability sampling method which consists in collecting information from the individual himself who has already experienced the phenomenon in his daily life.

In qualitative research, the size of the sample is determined by redundancy, that is to say when there is repetition of the information collected. Our sample was limited to the time when there was repetition of information without producing new declarations (9 birth attendants).

2.4 Data collection method, technique and instrument

Phenomenology is the method for conducting field surveys and it is the method par excellence for this study since we have to do with the social facts that people experience on a daily basis. The semi-structured face-to-face interview (self-report) is the technique used in this study in order to allow the interviewee to express all his thoughts. And to keep the information faithful, we used a recorder to record the entire speech or thought expressed by the respondent. We used the interview guide associated with a dictaphone to record.

Rose Mujinga Ntumba, Valentin Boya Bwembola, Blanchard Kibimombo Mopezo, Ernest Kamayi Mulumba, Jeannot Nkumbi Malu, Jean Marie Emongo Laama, Vincente Esamboy Apandjo, Guy Mukendi Kalonji, Astrid Kabanga Kashala, Flavie Baza Flavie, Gervais Kayembe Mutondo, Augustin Kadiata Bukasa[6], "Experience of nurse midwives and midwives on the management of postpartum hemorrhage "the case of CELPA Maternity, in the city of Kinshasa"," *International Research Journal of Advanced Engineering and Science*, Volume 7, Issue 2, pp. 135-139, 2022.

2.5 Data analysis plan

The data were analyzed according to an approach called the reduction of the hidden meanings inherent in the descriptions that the subjects made of the phenomenon studied: the keeping of educational documents.

The data analysis was thematic and categorical, that is to say from the theme, we retained sub-themes then categories supported by verbatim with their meanings.

This analysis was made following:

- Try to describe the highlights of the interview
- List key words or key phrases
- Transcribe the interviews in the form of verbatim to develop a feeling,
- Extract the data under the statements and expressions that relate to it,
- Eliminate repetitions of statements, formulate themes and sub-themes,
- Delineate all the meanings in central theme,
- Analyze the central theme according to the specific objectives of the research,
- Configure literature review results in items.

2.6 Ethical Considerations

In the health field where we have worked on humans, it is preferable from the start that ethical considerations are taken into account with rigor, it was necessary to respect this obligation, to seek informed consent. In the same logic, we committed ourselves as investigators to respecting the confidentiality of the information collected while taking care to explain the purpose and objectives of the study, to define what was expected of the respondent, to answer questions that the respondent might ask themselves, to explain the methods of data collection and to choose a quiet environment, sheltered from noise and this in collaboration with the respondent.

Moreover, the respondent had the possibility of refusing the interview or interrupting it at any time.

III. RESULTS

3.1 Results on Socio-Demographic Characteristics

TABLE 1. Sociodemographic characteristics of study subjects

Initial	**Age**	**Study level**	**Speciality**	**Service seniority**	**Have had a case of PPH**
ACC1	43 years	A1	Nurse	15 years old	Yes
ACC 2	32 years old	A1	Nurse	3 years	Yes
ACC 3	40 years	A2	Nurse	9 years	Yes
ACC 4	41 years	A1	Nurse	16 years old	Yes
ACC 5	25 years	A1	Nurse	3 years	Yes
ACC 6	55 years	A1	midwife	16 years old	Yes
ACC 7	36 years	A1	Nurse	12 years	Yes
ACC 8	29 years	A1	Nurse	Four years	Yes
ACC 9	33 YEARS	A2	Nurse	6 years	Yes

Caption: ACC (midwife); A1 (Graduated); A2 (State diploma).

By considering the data on socio-demographic characteristics, we find that the respondents who participated in our study are mostly level A1 (graduated), nurses from their training with only one midwife. All in unanimity, they have already managed a case of postpartum hemorrhage; they have a seniority ranging from 3 to 16 years.

3.2 Results of the qualitative analysis

The categorical analysis consisted of grouping (by going back and forth) the verbatim (in the form of the words) with regard to the categories and themes in coherence. After reading our transcriptions of the interviews recorded with 9 midwives, having used the syntactical analysis unit in a closed encoding of the interviews, according to a data analysis matrix at four levels: sub-theme, categories, verbatim and meanings. The central theme chosen is: “Experience in the management of postpartum haemorrhage”.

The syntactic unit is a sentence or a group of words from the verbatim of interviews or observation notes; that is, ideas expressed.

The data analysis was only centered on the speeches. The redundant verbatim were then grouped together in a cloud to bring out the categories.

From this central theme, two sub-themes flow, namely: experience in the management of postpartum haemorrhage and strategies for improvement/expectation of staff.

Sub-theme 1: Experience in the management of postpartum hemorrhage, fromthis sub-theme three categories emerged, namely:

- Category 1: Approach to care
- Category2: Strengths in care
- Category 3: Weaknesses in care

Sub-theme 2: Strategies for improvement/Staff expectations, the analysis of this second sub-theme has brought out two categories, namely:

- Category 1: Strategy/Expectation vis-à-vis motherhood
- Category 2: Strategy / Expectation vis-à-vis the Ministry of Health

The analysis consisted in grouping the verbatim statements according to the corresponding category, to which we attributed hidden meanings, inherent in the descriptions that the interviewees made of the phenomenon studied. The meanings from each category constitute the results of this study.

3.2.1 Sub-theme 1: experience in the management of postpartum haemorrhage

- *Approach to care*

By considering the midwives' statements on the care process, they reassure us that they first call for help, keep the mother in the recovery room, give the comfortable position, look for the cause and act. accordingly, monitor vital signs. So it's an approach that respects the principles of care. Some of them testify by saying: *ACC1 , ACC2, ACC3, ACC5; ACC6, ACC7, ACC8:"...First you have to place the venous access, check if there is presence of the safety globe, repair the soft parts if there are tears, if there is atony, you have to do uterine massage, giving uterotonics, doing a uterine revision, checking the hemoglobin level…”*

- *Strengths and weaknesses in the care*

In case management, birth attendants report that they have mastery of postpartum haemorrhage cases, but some of the difficulties that limit them are the lack of blood bank,

137

Rose Mujinga Ntumba, Valentin Boya Bwembola, Blanchard Kibimombo Mopezo, Ernest Kamayi Mulumba, Jeannot Nkumbi Malu, Jean Marie Emongo Laama, Vincente Esamboy Apandjo, Guy Mukendi Kalonji, Astrid Kabanga Kashala, Flavie Baza Flavie, Gervais Kayembe Mutondo, Augustin Kadiata Bukasa[6], “Experience of nurse midwives and midwives on the management of postpartum hemorrhage "the case of CELPA Maternity, in the city of Kinshasa",” *International Research Journal of Advanced Engineering and Science*, Volume 7, Issue 2, pp. 135-139, 2022.

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insufficient staff and unavailability of the laboratory service at night. To express their strengths (positive points) they say: *ACC6, ACC8: "…in most cases we always manage to control the situation and then the woman will start to recover little by little…";* But despite this, they still point out the weaknesses in particular: *ACC2 , ACC5: "... there is a lack of nursing staff and a lack of the blood bank..." ACC 9 , ACC3 : "...As weak points, we do not have enough training on the matter… "*

3.2.2 Sub-theme 2: Improvement Strategies/Staff Expectations

In this last box, the personnel formulate the expectations which are at the same time the strategies for improvement. For the maternity, they ask to make relief products available, to increase the number of staff and to the Ministry of Health to set up a blood bank, to supply the maternity with drugs, and to strengthen the capacities of the staff. They themselves express this in these terms: *ACC5 , ACC6 , ACC7 : "…The ministry must make basic necessities available, build capacity with training…" ACC9: "…The ministry must increase motivation…"*

IV. Discussion

4.1 Sociodemographic Characteristics

By considering the data on socio-demographic characteristics, we find that the respondents who participated in our study are mostly level A1 (graduated), nurses from their training with only one midwife. All in unanimity, they have already managed a case of postpartum hemorrhage; they have a seniority ranging from 3 to 16 years and almost all are registered in the order of Congolese nurses.

These results make us notice that there is a lack of a very important professional category (midwife) for the effective and efficient management of maternity.

4.2 Experience in the Management of Postpartum Hemorrhage

- *Approach to care*

By considering the midwives' statements on the care process, they reassure us that they first call for help, keep the mother in the recovery room, give the comfortable position, look for the cause and act. accordingly, monitor vital signs.

This attitude seems better in the management, because in a study conducted by Julie TORT (2016), they showed that the injection of oxytocin within ten minutes of the diagnosis of PPH was a determining factor in improving the maternal health in Benin and Mali. Prompt diagnosis of PPH and better immediate postpartum monitoring were also important [12] .

Considering that postpartum hemorrhage constitutes an obstetrical emergency. It can be prevented and treated by following guidelines based on scientific evidence and national and international expert consensus. If treatment is ineffective, death can occur within two hours. The challenge for low-resource countries, and especially those in West Africa, is to implement these treatments in a timely manner. Various factors can influence the delays in the treatment of PPH in this region. A significant number of women give birth outside of health facilities, especially in rural areas [12] .

- *Strengths and weaknesses in the care*

In case management, midwives note that they have control of postpartum haemorrhage cases, but some of the difficulties that limit them are the lack of blood bank, insufficient staff and unavailability of the laboratory service at night.

These weaknesses make proper care difficult. Indeed, in the Democratic Republic of Congo in the majority of cases, postpartum haemorrhage (HDD) results from a lack or delay in treatment. As a result, for several years, the objective has been to improve the management of hemorrhage and to develop less invasive techniques such as uterine artery embolization (UAE) which do not permanently alter the fertility of these patients. Hence this management must be multidisciplinary and anticipated by organizational procedures within the framework of perinatal networks. Clinical practice recommendations are required and form the basis of this support **[10]** .

4.3 Strategies for Improvement/Staff Expectation

In their statements, staff formulate expectations which are at the same time strategies for improvement. For the maternity, they ask to make relief products available, to increase the number of staff and to the Ministry of Health to set up a blood bank, to supply the maternity with drugs, and to strengthen the capacities of the staff. These expectations correlate with the weaknesses they have identified.

4.4 Limitations of the study

Far from claiming to be perfect, our study also has limitations, the importance of which should be recognized and noted at this level, in particular:

First, our study being phenomenological, only the subjects concerned were able to relate their perception, the veracity of which our instrument did not have the capacity to verify. We circumvented this difficulty by doing restitution-confrontation-confirmation.

And then, the small size and non-representativeness of the sample made it impossible to generalize the results. Nevertheless, we have minimized this difficulty by using purposive sampling and primary selection.

However, the results of this study deserve due consideration, because they inform us about the overall perception of the management of postpartum hemorrhage at the CELPA maternity hospital, which is one of the maternity hospitals in the city Province of Kinshasa.

V. Conclusion

The data analysis was thematic and categorical, that is to say from the theme, we retained sub-themes then categories supported by verbatim with their meanings. At the end of this analysis, we arrived at the following results:

Compared to experience in the management of postpartum hemorrhage: the management process, they reassure us that they first call for help, keep the mother in the recovery room, give the comfortable position, look for the cause and act accordingly, monitor vital signs. In case management, midwives note that they have control of postpartum haemorrhage cases, but some of the difficulties that limit them are the lack of blood bank, insufficient staff and unavailability of the laboratory service at night.

With regard to improvement strategies and/or staff expectations: staff formulate expectations which are at the same

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time improvement strategies. For the maternity, they ask to make relief products available, to increase the number of staff and to the Ministry of Health to set up a blood bank, to supply the maternity with drugs, and to strengthen the capacities of the staff.

In view of these results, it is necessary to recruit new staff with an emphasis on midwives in order to strengthen the workforce of the maternity ward.

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Rose Mujinga Ntumba, Valentin Boya Bwembola, Blanchard Kibimombo Mopezo, Ernest Kamayi Mulumba, Jeannot Nkumbi Malu, Jean Marie Emongo Laama, Vincente Esamboy Apandjo, Guy Mukendi Kalonji, Astrid Kabanga Kashala, Flavie Baza Flavie, Gervais Kayembe Mutondo, Augustin Kadiata Bukasa[6], "Experience of nurse midwives and midwives on the management of postpartum hemorrhage "the case of CELPA Maternity, in the city of Kinshasa"," *International Research Journal of Advanced Engineering and Science*, Volume 7, Issue 2, pp. 135-139, 2022.