NAMIBIAN MIDWIVES' EXPERIENCES OF USING THE PARTOGRAPH ON LABOURING WOMEN IN A REGIONAL HOSPITAL

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ABSTRACT

Childbirth carries risks for labouring women, especially when giving birth in rural health care facilities far from more advanced medical help. The partograph is a tool that was recommended by the WHO to monitor labour. It has been proven to be effective in identifying potential childbirth emergencies but is poorly utilized, with observations either not monitored or not documented. This results in midwives not identifying problems and not taking action, endangering mother and baby. Midwives working in a referral hospital reported that labouring women were often incorrectly referred, often due to incomplete or incorrectly plotted partographs. It was suspected that midwives experienced problems with utilizing the tool. The significance of the study was to determine the midwives' experiences of using partographs when monitoring labouring women, so that guidelines could be developed to improve

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its use. A qualitative, explorative, descriptive and contextual design was utilized. The research population consisted of ten midwives employed by a referral hospital in Namibia and was sampled purposively and conveniently. Data was gathered using semi-structured interviews that was content analysed. Trustworthiness was ensured using Guba's model. Throughout the study the ethical standards of fairness, beneficence, no-harm and respect for participants' rights were upheld. The findings revealed that although the midwives had a positive attitude to using the partograph, they experienced obstacles such as lack of skill or insufficient knowledge among midwives, completion of the document was time consuming, an unrealistic staff/patient ratio and lack of proper equipment. All of these were causal factors in discrepancies in plotting. Recommendations were made regarding in-service education, ensuring standardized plotting and staff ratios.

Keywords: midwives, intrapartum care, monitoring labouring women, partograph

INTRODUCTION AND BACKGROUND INFORMATION

In 2010, it was estimated that 287 000 maternal deaths occurred across the globe. Admittedly, that year saw a decline of 47% (543 000) in comparison with figures of 1990 (WHO, 2012:1). Despite such a decline, though, developing countries including Namibia continue to account for 99% (284 000) of maternal deaths globally. In 2010, the sub-Saharan maternal mortality rate was 500 per 100 000 live births, with a large percentage of these occurring in Namibia. The partograph originated in 1954 and was designed to demonstrate cervical dilation. In 1972 the Philpott partograph was developed to meet the maternal health needs of African women in labour (Mathai, 2009:257). Women giving birth are often cared for by midwives who utilize the partograph as a tool to monitor labour. The partograph is the tool of choice to record intrapartum details of labour including vital signs, cervical dilatation, strength of contractions and foetal vital signs such as heart rate. A curved alert and action line allows the midwife to effectively manage labour (Khonje, 2012:17). In a Nigerian study by Fawole, Adenkale and Hunyimbo (2010:200), it was reported that midwives implementing the tool used it as an early warning system, assisting in early referral decisions and in ongoing evaluation of the effect of midwifery intervention. The partograph also was used as a communication tool between team members (Qureshi, Kigondu-Sekadele & Mutiso, 2010:235).

Poor utilization of partographs during labour is a widespread concern among midwives in developing countries, including Namibia. In fact, Yisma, Dessalegn, Astakie and Fesseha (2013:8) indicated that inadequate knowledge and utilization of the partograph by midwives could be the reason for the high maternal mortality rates. The World Health Organization (WHO) adapted the partograph and encouraged its use in low resource settings (Mathai, 2009:256). In spite of the WHO recommendation on

the use of partographs for monitoring labour, they still are not widely used in Kenya and other developing countries (Qureshi *et al*., 2010:235).

The regional hospital in Namibia where the study took place is a large state hospital, with a large maternity ward composed of four sections, namely, a labour unit, a postnatal unit, a neonatology unit and a premature unit. It is a referral hospital to which the eight district hospitals, and the nearby health centres and clinics send their patients. Its function in relation to obstetric care is the management of severely ill pre-natal and post-natal women, as well as pregnancy complications such as prolonged labour, malpresentations, obstructed labour, uterus rupture, haemorrhage and foetal distress, which need special advanced care. Partographs are used to monitor the labour of all women admitted to the labour unit.

STATEMENT OF THE RESEARCH PROBLEM

To date, the factors that result in inadequate partograph usage in Namibia have not been investigated thoroughly. A study on emergency obstetric care conducted in Namibia in 2005 (Ministry of Health and Social Services, 2009:6) revealed that the partograph was inadequately utilized during labour leading to childbirth emergencies not being identified timeously. The study accordingly recommended that the partograph should be used at all levels of care during childbirth. However, the study also indicated that it was not known why midwives did not utilize the partograph properly, what problems they encountered or how they experienced the use of the partograph. Therefore the significance of the current study was to determine the experiences of midwives regarding the utilization of the partograph in a Namibian regional hospital. Thus, the research question that guided the study was: 'How do midwives working in a regional Namibian hospital experience the use of the partograph when caring for a woman in labour?'

RESEARCH OBJECTIVES

The objectives of this study were to explore and describe the experiences of midwives working in a Namibian regional hospital of using the partograph for monitoring labouring women and to make recommendations that will help midwives to use the partogram correctly.

DEFINITION OF CONCEPTS

Intrapartum care refers to midwifery care, including preventative measures and promotion of normal birth, given to a woman during the time she is in labour, is delivered of a child and the period shortly thereafter. During this period the midwives make observations of the progress of labour and monitor foetal condition to identify problems early (Fraser, Cooper & Nolte, 2011:3).

Labouring woman refers to a pregnant woman who is having regular, rhythmic uterine contractions, gradual dilatation and effacement of the cervix and show (Cronjé, Cilliers & Pretorius, 2011:31). During this stage, the labouring woman is under the supervision of a midwife who is trained to diagnose and monitor the progress of labour. In this study, critical attention was paid to the utilization of the partograph in monitoring the progress of labour, which should ensure a safe delivery.

A midwife is a health professional who works in partnership with the labouring woman to give the necessary support, care and advice during pregnancy, labour and the postpartum period, as well as to conduct births and to provide care for the new-born infant. Such care includes preventive measures, promotion of normal birth, detection of complications in mother and child, accessing medical care or other appropriate assistance and carrying out emergency measures as defined by the International Confederation of Midwives (in Fraser *et al*. 2011:5). In theory, the midwife is knowledgeable and skilled in using the partograph to monitor labour.

A partograph is a graphical illustration representing the progress of labour in a woman, and includes a number of parameters such as the dilatation of the cervix, and maternal and foetal vital signs. The purpose of partograph use is to ensure normal labour, or to identify problems so that timeous decisions can be made to prevent complications in childbirth (Pearson, Larsson, Fauveau & Standley, 2007:66).

RESEARCH METHODOLOGY

A qualitative, explorative, descriptive and contextual study was used in this project. Brink (2006:119) stated that the best research design is the one that is most suitable to the research problem and purpose. As the researcher was interested in experiences, a qualitative design was chosen. According to Burns and Grove (2011:256), a study is descriptive when the researcher needs to tell the reader what the experiences of participants are. In this particular study the researcher described the research method, the characteristics of the research population as well as the midwives' experiences of using the partograph.

According to LoBiondo-Wood and Huber (2010:198), explorative studies help the researcher to gain insight into a situation where little information about the topic is known. The study was explorative because although much is known about the effectivity of the partograph, there is very little in the literature that elaborates on how midwives experienced its use. The study was contextual as it took place in a midwifery ward where the partograph was used to monitor labour. The midwives also came into contact with partographs of women presenting with problematic labour who were living near the hospital as well as those who were referred from outlying areas.

The research population

The target population consisted of 36 midwives who worked at a maternity ward in the research area. Each one had more than one year experience in practising midwifery, during which time they had to use the partograph to monitor labouring women. They had been working in midwifery for periods ranging from three to 30 years. All participants were females with ages ranging between 28 and 57 years. Two participants had an additional qualification in midwifery and neonatal nursing science. Four of the participants also had a bachelor's degree in nursing management qualification. All of them were registered with the Namibian Nursing Council as midwives. The sample was selected conveniently and purposively (Polit & Beck, 2012:517) and consisted of 10 participants.

Data collection

Data were gathered in February 2014 using semi-structured interviews where the participants were asked to describe how they experienced using the partograph in monitoring a labouring woman's progress. They were asked to describe the problems they experienced and to make suggestions on how the tool could be used more effectively. Each interview lasted 40–60 minutes. The researcher, who is a colleague of the participants, arranged for an independent interviewer who did not have a connection to the hospital, so as to prevent conflict of interest and maintain confidentiality, to conduct the interviews. It was hoped that in such a setting and with such an interviewer, participants would be more willing to discuss the problems they experienced with partograph use without fear of repercussion. No names of the participants were used and the individual participants were free to determine when and with whom private information would be shared or withheld (Brink, 2006:33). A variety of interview techniques such as probing, clarifying, minimal verbal responses and the interviewer keeping silent at times were used to obtain in-depth information (LoBiondo-Wood & Haber, 2010:275). The interviews were collected in a private office where confidentiality could be ensured.

Data analysis

Data analysis is a mechanism for reducing and organizing data to produce findings that need interpretation by the researcher. Creswell's steps of content analysis were used (Creswell, 2009:186). This meant that the researcher carefully read through all the transcriptions, making notes in the margins of the interviews of ideas that came to mind. Words and phrases that indicated meaning were underlined. Topics emerged and were used to form categories, which were developed into themes and sub-themes. Descriptive wording for each theme and sub-theme was identified. The researcher also attempted to determine relationships between the categories. To ensure trustworthiness,

use was made of an independent coder who followed the same method of analysis. In a meeting the researcher and coder compared their findings and reached consensus on the final themes and sub-themes.

Measures to ensure trustworthiness

Guba's model of trustworthiness was used to ensure rigour (Lincoln & Guba, 1985, cited in Polit & Beck, 2012:584). The researcher was knowledgeable regarding the methodology, attending training and studying textbooks, and planning the project meticulously. Triangulation was ensured by using more than one source of data such as interviewing, field notes and literature. Member checking was done by asking participants to read their own interviews and comment on these. Purposive sampling was used to ensure that the best sources for information were identified and interviewed. A rich description of the methodology and findings are offered to ensure that a reader could generalize the findings. A pilot study was also done to ensure that the interviewing method as well as the questions asked delivered the required data.

Ethical considerations

The researcher obtained permission to conduct the study in a public hospital from the Permanent Secretary and director of the Ministry of Health and Social Services in Namibia as well as from the university research committees (ethics number H13-HEA-NUR-015). The medical superintendent and nursing service manager of the regional hospital as well as the midwifery unit supervisor gave permission for the study. Study participants gave written informed consent. Participants were informed that participation was voluntarily and that they had the right to withdraw from the study without penalty at any time (Burns & Grove, 2011:123). Bias was avoided by asking an independent interviewer with no connection to the hospital to conduct the interviews. Privacy was maintained through interviewing each participant in an office at the hospital that was free from disturbances and manipulation. Confidentiality was guaranteed by reassuring participants that only the researcher, supervisor and coder will have access to the transcribed interviews. The researcher ensured that the transcribed data was given to the independent coder with no identifying information of the participants. The list of the participants in the study was kept separated from the recordings and transcripts of the interviews so that the data could not be linked with the participants' names. Information gathered was kept safe in a locked cupboard (De Vos, Strydom, Fouché & Delport, 2011:408).

DISCUSSION OF RESEARCH RESULTS

The study found that all the participants were familiar with using the partograph to monitor labour. The hospital where they were working was a referral facility, with

the result that these midwives came in contact with partographs generated by their colleagues as well as partographs that had been completed by midwives working in the referral agencies. This gave them the unique opportunity of observing mistakes made on the partographs by midwives in outlying areas. Two themes were identified in the study. The first theme stated that midwives liked working with the partograph as it gave them the security that, if they used it correctly, they will identify problems quickly and could save lives. The second theme pointed to the various difficulties that the midwives had in using the partograph correctly, which may lead to detrimental outcomes. The array of obstacles falling under the second theme will be discussed further in this article.

Obstacle 1: New staff entering the unit may have insufficient knowledge of and skill in using the partograph

Some of the participants had been working in midwifery for a long time and thus they had a great deal of experience in monitoring labouring women; they indicated that they used the partograph with ease. These participants reported that they were able to quickly and accurately make the necessary observations that allowed them to take care of more than one woman in labour at the same time. The nursing care given in the maternity unit is specialized, dealing with normal as well as problematic labour and emergency deliveries requiring a midwife to make quick decisions and act on problems identified. One participant stated:

> Here we work in midwifery for a long time. The midwife who is working in labour ward, you just keep on working there. When a new staff member comes from another ward to work here, she does not know about the partograph.

New staff members entering the unit usually were qualified midwives but may not have been practising midwifery for a long time. This means that they often had insufficient knowledge of and skill in utilizing the partograph. They needed more time to make the observations and to plot accurately, and may have been unfamiliar with the new technology. Sometimes they were not properly orientated to the unit. A more seasoned midwife stated as much:

> Sometimes the midwife is just new and fresh from training … they do not have sufficient experience.

Should an emergency occur in the unit, the unsure midwife is not able to utilize the partograph and there may not be time for a more experienced midwife to help her. Midwives also noticed that partographs of women who were referred to the hospital were often inaccurately plotted, indicating that these midwives needed additional training.

Obstacle 2: Discrepancies in plotting indicated different approaches to completing the partograph

The majority of the participants reported discrepancies in monitoring the progress of labour. Some of the midwives did not know how to complete the partograph or they used different approaches to completing it. In the midwife's original training, plotting may have been done differently from how midwives at the regional hospital plot. This may create confusion especially among midwives who have to interpret the findings plotted on the partograph by another midwife. Participants, having found themselves in such a situation where they are obliged to try to interpret a partograph completed by another, explained the situation:

> The other thing is the way she recorded on that partograph may be different. Some, they use dots, some they use numbers. Like when the patient comes from a referral hospital, they come with their partograph and they may use those dots. It is not easy to interpret what someone was thinking ... did they know that the contractions were so intense, in what way, it is difficult to interpret someone's partograph if it is written in that way.

Participants also stated that midwives from the referral hospitals lacked sufficient knowledge in monitoring the progress of labour. This meant that the participants did not trust what was written on the graph. When a partograph was incomplete or contained confusing information, it could not be used to follow the progress of labour or the information could not be used to make treatment decisions.

Obstacle 3: It is time consuming to implement the partograph correctly

Most of the participants mentioned that doing the observations and completing the partograph take time. There are many details to fill in on the document. They added that at times there was duplication of records, for example, demographic information was already listed in the antenatal clinic card and transferring it to the partograph took time. One participant confirmed that duplication causes an unnecessary administrative burden:

> Yes, we are having two books, the one for ANC (ante natal clinic) and the other one for maternity. If there should be just one book from the antenatal clinic that can also be used in the labour ward, then they will just write in about the delivery.

Over and above having to deal with transferring information from the clinic card to the partograph, the midwife spends a lot of time making observations and filling this information onto the document, which is also seen as time consuming. Should there be more than one woman in labour, time pressures may result in observations being taken late, leaving gaps which makes interpretation of the document difficult and indeed

makes the information on the document itself unreliable since it does not reflect the current condition of the labouring woman.

Obstacle 4: The patient/staff ratio is unrealistic

A high patient/staff ratio means that there are too many patients needing care and not enough staff to do the work effectively, hence the staff is unable to make the observations in time. Often, a consequence of this unrealistic workload is that the partograph is started on admission but cannot be completed timeously because the midwife was involved with another patient when the next reading was supposed to have been done. When the midwife has a number of patients to take care of, there is not enough time to do the observations timeously and consistently. In the face of staff shortages, a midwife may get back to patient number one after two hours have elapsed, even though observations of said patient should have been done every 30 minutes. The high workload may result in a woman in delivery having had only one or two observations done since being admitted to the referring hospital. A participant described the shortcomings of high patient/staff ratio in this way:

> Patient nurse ratio like here ... if you are having like seven patients at the same at the prep area, who need observations to be done, you cannot do it when it is supposed to be done. Because when you finish this one maybe, it is time for the other one. Then when you come back to the first one the time is already gone, and there can be a gap in the record.

The participants described that they were very few in number relative to the numbers of labouring women; sometimes only one midwife was allocated to a section yet was expected to do all the activities in that section during the period she was on duty.

Obstacle 5: A lack of resources caused problems in using the partograph

The participants also reported that midwives could not provide quality service without sufficient material resources. Adequate equipment is needed in the maternity ward to ensure high standards and continuation of care. Sometimes there was a lack of material resources, contributing to poor health care delivery. Equipment deficits negatively influenced these midwives' ability to make the necessary observations. For example, without a cardiotocograph machine a midwife cannot easily and quickly monitor foetal heart rate. Also, at times there were not enough beds available, and patients had to lie on the floor, which made it difficult to do proper assessments. Power supply interruptions or even complete electricity breakdowns also occurred, and without proper lighting monitoring a labouring woman's progress is impossible. A participant shared her concerns in this regard:

> About the equipment, we are not really having enough equipment like CTG (cardiotocograph) machines to monitor the foetal heart rate. Sometimes we don't have enough spaces and beds. You cannot observe them, they are lying on the floor, and then they deliver there.

The lack of material resources combined with the lack of sufficient staff made using the partograph correctly difficult.

DISCUSSION OF RESULTS

The participants in this study indicated that using a partograph to assess the progression of labour gave them the security that they will be able to identify problems and act in time to prevent childbirth emergencies. They also indicated that they were experiencing obstacles preventing them from using the partograph effectively. These could involve problems associated with the document itself or problems associated with the environment or the staff utilizing the partograph.

The document was seen as simple and easy to use. However, a lot a detail had to be filled in every 30 minutes, making it a time-consuming task. If all the detail was not recorded, informational gaps were left, which makes it difficult for the midwife on duty to identify problems and to decide when to act. In short, for the partograph to be used effectively, the midwife has to consistently take a number of measurements, which takes up time she does not necessarily have at her disposal.

Yisma and his colleagues (2013:6), who studied partograph use among midwives in public health institutions of Addis Ababa, Ethiopia, indicated that midwives failed to fill in the partograph because it was too detailed and time-consuming, and hospitals and clinics did not have enough staff to utilize this tool correctly. Either staff were not taking correct measurements and consequently plotting them incorrectly, or not enough measurements were being recorded, resulting in informational gaps. These problems were evidenced in the experiences of Namibian midwives as well, which were detailed in the current study. In turn, Mathibe-Neke, Lebeko and Motupa (2013:151) studied midwives' use of the partograph, in an academic hospital of Gauteng Province, South Africa, and concluded it was underutilized because of discrepancies in the recording of findings among different staff members, such as those pertaining to the vaginal examination, early plotting before the woman is in active labour, a pattern of incorrect plotting, along with confusion in transfers and referrals from other hospitals due to differences in plotting. These findings were corroborated by the current study on Namibian midwives' use of the partograph, and indeed it found that midwives had different approaches to plotting their findings, making it very difficult for a second midwife to interpret the information on the graph.

The current study disclosed that environmental factors such as staff with insufficient knowledge and skill, unrealistic patient/staff ratios and lack of resources make the correct and thus effective use of the partograph difficult. Ten Hoope-Bender, Liljestrand and MacDonagh (2006:228) stated that the road to improved maternal health

is clearly through skilled human resources. These authors (2006:232) also confirmed the importance of having the necessary tools for the job, such as equipment and supplies to ensure a quality service. A study in the United Kingdom by Smith, Dixon and Page (2009:23) explored health care professionals' opinions about safety in maternity and concluded that it is not possible to deliver quality work with only a few midwives on duty. To sum up, a lack of staff, equipment or skill may lead to incorrect information plotted on partographs, or indeed incomplete partographs, which in turn may lead to confusion and missed opportunities to identify childbirth emergencies in the making. When a midwife has difficulties in interpreting results for whatever reason, she may overlook a looming crisis.

CONCLUSIONS

From the experiences articulated by participants in this study and themed by the researcher, it is clear that midwives were aware that using a partograph to track the progress of a woman's labour may help prevent childbirth emergencies. However, it was evident that the partograph was not always utilized properly in the regional hospital and outlying district. To successfully implement partograph use, a supportive environment had to be created, one ensuring enough equipment and midwives who are skilled and knowledgeable. Guidelines for the use of the partograph should be developed and should focus on consistently monitoring a patient in labour, recording the progress of labour in a uniform manner and indicating which parameters should be used in decision-making.

RECOMMENDATIONS

Analysis of participants' experiences of partograph use revealed that there should be standardization of recording information or plotting progress on the partograph. This can be ensured by training curricula in midwifery training centres that include promotion of one particular manner of plotting. Regular in-service education sessions or refresher courses should be conducted in midwifery centres such as those in regional hospitals to ensure conformity in plotting among all the midwives involved in that area. It can also be emphasized to newly appointed midwives that the use of the partograph is absolutely essential in identifying emergencies. Posters indicating the correct way of assessing a labouring woman and plotting progress could be displayed in clinics and labour units that at a glance can reassure a midwife she is monitoring and plotting correctly. Environmental problems such as staff shortages in maternity wards should be addressed urgently, as should lack of equipment and equipment malfunction.

LIMITATIONS OF THE STUDY

Limitations identified in this study are true of qualitative studies in general: the experiences and views of only a small number of midwives were determined and thematized. Also, all participants were associated with a hospital where there is the necessary backup should things go wrong, in other words access to an obstetrician. Midwives from the district or outlying clinics were not involved in the study. Therefore the findings cannot be generalized to the entire region, country or to other midwives more generally, and the reader of this article should draw his/her own conclusions relevant to their own contexts and situations.

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