Quest Journals
Journal of Medical and Dental Science Research
Volume 5~ Issue 3 (2018) pp: 04- 08
ISSN(Online) : 2394-076X ISSN (Print):2394-0751
www.questjournals.org

Competence of Midwives in Management of Pregnancy and Labour Complications In Mashonaland East Province, Zimbabwe

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ABSTRACT: *Competent midwifery workforce is critical in reduction of maternal mortality and morbidity. Midwives are expected to be competent in managing normal labour and delivery as well as identification of deviations from normal, and collaboratively manage complications. The purpose of the study was to determine perceived competence levels of midwives in management of intrapartum complications. A quantitative descriptive approach with a self-assessment scale was used to assess competence levels of 256 midwives working in rural and district maternity units. The findings revealed that midwives perceived themselves incompetent in very important critical skills such as performing assisted deliveries and managing shoulder dystocia. Competence based on job training needs to be conducted in all health facilities.*
KEYWORDS: *Midwives, Competence, Intrapartum, Complications, Skills*.

Received 06 April, 2018; **A**ccepted 21 April 2018 © The Author (S) 2018. **P**ublished With Open Access At **Www.Questjournals.Org**

I. INTRODUCTION AND BACKGROUND

Midwifery training in Zimbabwe has adopted a competence based approach which entails application of knowledge, skills and behaviours that fulfil work setting requirements expected of the Scope of Practice (SOP). [1]. NCZ is the body responsible for ensuring that only competent midwives are registered and licensed to provide midwifery care. Competent midwives should possess decision making skills, problem solving, critical thinking, negotiation and leadership skills to utilise that risk approach assessment, planning, implementation and evaluation skills [2].

Midwifery care includes provision of quality antenatal care including early detection or referral of selected complications. Provision of high quality culturally sensitive care during labour, conducting a clean and safe delivery as well as handle selected emergency situations as specified in guidelines and provision of comprehensive post-partum care and new-born care up to two months of age. [3] Evidence from diverse global settings has shown that majority of the deaths related to pregnancy and child births are avoidable if competent and skilled personnel provide quality care and perform lifesaving interventions (4;5;6;7;8]. Child birth is expected to be a joyful moment for the family and community not a death trap. It is expected that good management of women during pregnancy, labour and delivery should fulfil this expectation. In Zimbabwe the maternal mortality rate (MMR) is a 651/100000 live births [9] of which 47% are said to be avoidable. Institutional births have increased to 77% while skilled attendance increases to 78% [9]. Most of these births occur during or shortly after child birth due to ineffective management of pregnancy and childbirth related complications [10]. 99% occur in rural and poor communities not affording skilled attendance [11].

Maternal complications such as ruptured uterus, post-partum haemorrhage (PPH), sepsis are major causes of morbidity and mortality among women of childbearing age. Midwives are expected to be competent in identification of possible risk, managing the complication collaboratively with other health care professionals. These essential competencies are being taught in schools of midwifery as well as continuing education programmes such as basic emergency obstetric and new-born care (BEmONC).[12] Competence in midwifery does not only entail ability to fulfil certain roles or completing specific tasks but also involves being able to work collaboratively with others, being accountable and ability to recognise own limits.

II. PROBLEM STATEMENT

Good maternal outcomes requires a competent midwife or attendant who can practice independently or collaboratively in provision of antenatal care (ANC), labour and conduct a safe delivery for normal labour and detect and manage complications in intrapartum care. Globally major complications accounting for 75% of deaths are bleeding, infection and complications of delivery. [13] Mashonaland east is among the top 5 provinces in Zimbabwe contributing to the overall maternal mortality.

The high maternal mortality has been and is still a global and national concern in which all aspects need to be investigated. A lot is known about causes and strategies were put in place to increase skilled attendance and institutional deliveries. This study sought to determine the competence levels of midwives as regards to management of intrapartum complications in Mashonaland East province in Zimbabwe.

III. CONTRIBUTION OF THE PAPER.

Findings of the study may be useful in development of a continuing education professional development model which enhances skills development. The goal of midwifery practice is to save women's and neonate's lives with quality cost effective midwifery care based on sound continuing education. This should have meaningful contributions towards attaining Sustainable Development goals 3.3 of reducing maternal mortality to below 70/100 000 births by 2030.

IV. METHODS AND MATERIALS

A quantitative descriptive approach was used to determine the competence levels in managing intrapartum complications. A self-assessment competence scale was used to assess competence levels of 256 midwives from 1 provincial hospital and 6 districts in Mashonaland east province in Zimbabwe. Districts are rural with not more than 3 doctors and mostly midwife providing maternity services. Obstetricians do not exist in the study settings. The province has 9 districts and 1 provincial hospital. All districts offer comprehensive maternity services which includes caesarean sections and blood transfusion [14].

The 256 midwives were purposively selected from 13 institutions comprising of 1 provincial hospital, 6 district hospitals and 6 rural/mission hospitals. The midwives were selected based on qualification and minimum duration of working in maternity which was from 6 months. The midwives were all certified competent by the regulatory board and assumed knowledgeable about phenomenon under study. Self-administered competence scale designed by the researcher using Benner's clinical competence framework was used to collect numerical data. The scale rated from level 1 to 5 where level 1 referred to someone who needs training or assistance from supervisor and level 5 being an expert who can perform without reference and capable to train others. The scales were distributed after an explanation to each individual participant and later collected in sealed envelopes. Section A comprised of demographic data and section B had the competence scale.

Reliability was determined by piloting the instrument with 20 purposively selected midwives from 2 hospitals not in the study. The midwives were informed about the purpose and expected outcomes of the study to assess whether the questions were measuring what was intended.[15] Data was analysed using Statistical Package of Social Sciences (SPSS) version 20. Computer programmes using frequency distributions were after data coding. Data was presented in frequencies and percentages.

V. RESULTS

5.1 Demographic Profile

Of the 256 midwives the findings revealed that 228 (89.1%) were females and 28 (10.9 %) males. The majority 157(69.1%) were within 32 to 42 age range and 9.4% were aged between 25 to 31 and 15.3% were aged 43 to 50 years while 6.2% were aged above 50 years with a mean age of 38 years and the eldest being 69 years. The findings revealed that 89(34.8%) midwives had six months to 2 years working in maternity, 87 (34,0%) had 2 -5years, then 60 (23.4%) had above 5years to 10 years' experience in maternity and 20(7.8%) had above 10 years with the longest duration being 27 years. On qualifications 15(5.9%) reported having certificates, 233(9%) had diploma in midwifery and 8(3.1%) were degree holders

5.2 Competence of midwives regarding management of intrapartum and post-partum complications

The aim of this part of the study was to give participants an opportunity to report their own perceived competence level in performing an identified skill. The competences under assessment were management of abnormal labour, delivery and immediate postpartum complications.In this study one was considered to be competently performed if perceived level ranges from level 3 and more than 65% participants performed above that level. A total of 256 midwives participated in self-assessment. The findings revealed that the midwives perceived themselves competent in almost all the competence except for performance of assisted deliveries like vacuum extraction or forceps and on managing shoulder dystocia (Table 1).

Table 1: Perceived competence levels of midwives regarding management of intrapartum and postpartum complications.

N=256

variable	Competent	
	Frequency	%
Early rupture of membranes	226	88.3
Managing hypo and hypertonia	209	81.6
Detecting and managing prolonged labour	229	89.4
Diagnosing abnormal lie and presentation	229	89.4
Managing cord prolapse	216	84.4
Performing assisted deliveries	68	26.6
Managing shoulder dystocia	136	53.1
Managing PPH	215	84

VI. DISCUSSION

61 Demographics

The findings revealed that midwifery is a female dominated profession with great majority 89.1% being women. This is the trend in several countries worldwide and implies that females are more attracted to become midwives than their counterparts. The results indicated that four out of five midwives were in less than 43 years while one of five was above 42 years. This implies that mature young midwives are providing most midwifery services. They are expected to bring new scientific knowledge and be more competences to midwifery practice. However the experience and skills of the elderly are essential for mentoring them. One third of the midwives had less than two years working in maternity while the majority had 3 years or more which should be long enough to acquire competences and confidence in performing any skill. This finding shows that the midwives under assessment were actually not novices but mature and experienced. However the number of years in maternity does not guarantee competence. [16]

6.2. Competences regarding management intrapartum and postpartum complications

Findings demonstrated that midwives perceive themselves competent in most of the midwifery skills except for performance of assisted deliveries like vacuum extraction and managing shoulder dystocia. The significant numbers of midwives reported being incompetent in these critical skills makes it difficult to guarantee that every childbirth delivery assisted by the midwives will receive quality emergency obstetric and newborns care as recommended in the global maternal and newborns health care standards [17].

According to the midwifery curriculum [18] the midwife is expected to possess and demonstrate in practice the seven essential competences outlined by International Confederation of Midwives (ICM) [19]. The 4th essential competence requires the midwife to be able to handle selected emergency situations to maximise health of the woman and her new-born. Our study was conducted in a rural setting where obstetricians do not exist and midwife is the sole provider of the lifesaving interventions. [12; 2]

This article discussion will focus on the two critical skills in which the midwives perceived themselves being incompetent thus contributing significantly to maternal mortality and morbidity.

6.2.1 Performing assisted deliveries (vacuum extraction)

Findings from the study revealed that only 26.6% perceived themselves competent in performing assisted deliveries while 73.4% were incompetent. This finding concur with the findings from other several studies in south Africa [16], Ethiopia, USA [20] and other resource constrained settings [21-30] vacuum extraction is considered a lifesaving skill and is therefore imperative for a midwife or skilled attendant to possess the competence. [12; 2] Lacking this skill during delivery in a district or rural setting may be detrimental to both the mother and her new-born. Poorly performed vacuum or delay in performing it may lead to cervical tears, early placental separation and predispose the woman to post-partum haemorrhage (PPH). The baby is also at risk of asphyxia, injuries and low Apgar. PPH is the leading cause of maternal deaths in Zimbabwe and globally followed by infection which may be due to manipulation. [31]

6.2.2 Managing shoulder dystocia

The study revealed ta perceived competence in 53.1% and 46 9% of midwives being incompetent in managing shoulder dystocia. Shoulder dystocia is an unpredictable obstetric complication associated with adverse maternal and neonatal outcomes. If timely and competent interventions are not implemented in a matter of seconds there are high chances of uterine rupture, prolonged or obstructed labour and attribute to maternal morbidity and mortality in most resource constrained settings. [32] Midwives need clinical skills to estimate fetal weight and anticipate shoulder dystocia.

6.2.3. Conclusion

The midwives are expected to be 100% competent in performing critical skills such as doing vacuum extraction and delivering a shoulder dystocia. Though it is encouraging to find that midwives are competent in providing intrapartum care, there is need to address the significant numbers who are not competent in basic obstetric and new-born care if meaningful contribution toward attainment of Sustainable Development goals (SDG 3.3) most midwives needs support and access to sufficient learning and performance improvement opportunities. Availing resources and performance and quality improvement approaches to midwifery care for a favourable maternal and neonatal outcomes.

VII. RECOMMENDATIONS

- There is need for regular on-going in-service training on midwifery care to foster competence development and improve maternal outcomes.
- There should be continuous support, mentoring of newly qualified midwives by experienced midwives to facilitate migration along the competence continuum with confidence.

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Abigail Kapfunde ." Competence of Midwives in Management of Pregnancy and Labour Complications In Mashonaland East Province, Zimbabw" Quest Journals Journal of Medical and Dental Science Research 5.3 (2018): 04-08.