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Original Article

Understandings of episiotomy guidelines and second-stage perineal practices among midwives in Lagos, Nigeria

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ABSTRACT

Background: Second-stage perineal practices are potentially associated with significant pelvic floor consequences which can impact women's quality of life. ***Aim:*** This study describes midwives' understanding of episiotomy guidelines and perineal practices in the second stage of labour. **Methodology:** A cross-sectional survey of nurses at a tertiary hospital using structured self-administered questionnaires. Socio-demographic and professional characteristics; knowledge of episiotomy guidelines and second-stage perineal practices were assessed. Data were analysed with SPSS version 20.0 software. **Results:** Of the 280 nurse participants, 31.8% were aged 40-49years; 65% had post-basic or Bachelor of Nursing qualifications, and 71.8% had at least 6-10years of labour ward experience. Nearly all mentioned thick inelastic perineum, avoidance of 3rd and 4th-degree tears and instrumental delivery as recommended indications for episiotomy. About a third (37.5%) administered episiotomy to nulliparous women more than 60% of the time; the mediolateral type was given by 87.3% but fewer (73%) knew it as the recommended. About 50% obtained clients' consent while only 32.5% administered analgesia. The majority (91.8%) practised hands-on perineum for perineal protection. Overall, 92.5% had average to good knowledge of episiotomy guidelines. However, 65.7% had good second-stage perineal practices which were significantly associated with midwives' designations($p=0.002$), duration of nursing experience($p<0.001$) and knowledge of episiotomy guidelines($p<0.001$). Inadequate training in perineal protection techniques; impatience with foetal head at crowning and fear of perineal lacerations were reasons given for liberal episiotomy use.
Conclusion: Midwives' knowledge of current episiotomy guidelines is reasonable. However, perineal practices need to be improved to reflect evidence-based recommendations.

Keywords: Episiotomy; Perineal practice; Hands-on; Second stage; Midwives

INTRODUCTION

Episiotomy rates remain high in developing countries[1,2] Rates vary from region to region; within some despite guidelines recommending restricted the same healthcare facility; and among different cadres of maternal care providers.[3] Episiotomy practices may reflect professional norms, training experiences, subjective considerations and individual preferences rather than practices driven by evidence-based guidelines or variation in the physiology of vaginal birth.[4]

Routine episiotomy to prevent severe perineal trauma is not justified by current evidence as it confers no benefits on either baby or mother.[5] Its administration may increase the risk of pelvic floor dysfunction since tears in vaginal attachments; pudendal nerve damage and extension to third or fourth-degree lacerations may predispose to bowel incontinence and pelvic organ prolapse.[6] Routine episiotomy is therefore discouraged and should only be performed in carefully selected individuals.[7]

Despite numerous benefits of "restrictive episiotomy" such as fewer posterior perineal trauma; less need for suturing and fewer complications,[8] universal adoption by birth accoucheurs is still limited; selective performance of episiotomy is not yet fully embraced and rates are still significantly higher than recommended for many countries.[2] Painful perineum and sexual problems are prominent complaints reported in primiparous women and those who had episiotomy and/or instrumental birth.[4,9]

The second stage of labour is the period between full cervical dilatation and delivery of the baby when the parturient has an involuntary urge to bear down from expulsive uterine contractions.[3] It is potentially associated with significant consequences not only for the baby, but also for the mother .Childbirth trauma to the pelvic floor, especially third and fourth-degree tears, is associated with substantial morbidity that can have a lifelong impact on a woman's quality of life. Obstetric anal sphincter injuries (OASIs) are increasing worldwide; [9] and a rate of 8- 9% were reported for Nigeria in a multi-country study. [10]

Pelvic floor protection strategies in the second stage of labour aim to slow down the birth of the baby's head and allow the perineum to stretch slowly to prevent injury. These interventions include perineal massage; warm or cold compresses and perineal management techniques such as hands-on or hands-off the perineum and Ritgen's manoeuvre.

Earlier data found no difference between 'hands poised' and 'hands-on' the perineum for the prevention of OASI.[11] Interventional programs later suggested that perineal support as opposed to 'hands off' at crowning can reduce the incidence of OASIs.[7] More recently, poor-quality evidence suggests that hands-off techniques may reduce the need for episiotomy while moderate-quality evidence suggests that warm compresses and massage may reduce the occurrence of third and fourth-degree perineal tears.[12]

A shift to a 'hands poised' approach, where nothing is done except light pressure on the baby's head, only in the event of rapid expulsion, has been documented[13] even in midwives, who are reported to conduct four out of every five low-risk deliveries.[14] However, the benefits of these techniques on other outcomes are unclear or inconsistent while other perineal techniques have not been shown to improve outcomes for labouring women and their babies.[12]

The OASI-Care Bundle which comprises antenatal discussion about OASI; manual perineal protection; mediolateral episiotomy at 60° from the midline; and systematic examination of the perineum, vagina and ano-rectum after vaginal birth recently demonstrated the potential for reducing perineal trauma during childbirth;[15] with a reduction of 20% in the risk of OASI after its introduction.[16]

Evidence for episiotomy and perineal practices keep evolving, so birth accoucheurs especially midwives need to regularly update their knowledge to enable best practices. Since these details are not routinely documented, we assessed midwives' current understanding and implementation of episiotomy and perineal practice guidelines for second-stage labour at the maternity units of a university teaching hospital. Study findings may necessitate training sessions; revision of labour ward protocols to achieve better birthing experiences and obstetric outcomes for mothers as well as prevent future development of pelvic floor dysfunction.

METHODS

This cross-sectional descriptive study was conducted between July and December 2017 among 280 nurses who were practising or had practised at the labour wards of the Lagos State University Teaching Hospital (LASUTH), Ikeja, Nigeria. LASUTH is a referral centre for private and public health institutions in Lagos and the neighbouring states.

During the study period, the Obstetric Unit of the Department of Obstetrics and Gynaecology functioned from the maternity outposts of Ifako- Ijaiye and Isolo General Hospitals, Lagos, Nigeria. A total of 300 to 350 deliveries were recorded monthly from the two units.

Participants were nurses of all cadres who had practised in the labour wards for a minimum of one year. Those with less than a year of labour ward practice were excluded. A sample size of 280 was calculated using a 5.0% error margin and 40% prevalence of episiotomy from a previous study and 10% was added to make up for nonresponse rate. Eligible nurses were consecutively recruited after obtaining informed consent. Socio-demographic and professional characteristics; knowledge of episiotomy guidelines and second-stage perineal practices were assessed using structured self-administered questionnaires. Primary outcome variables were nurses' knowledge of episiotomy guidelines and second-stage perineal practices. Factors affecting knowledge and perineal practices were also examined.

This study was carried by following the ethical standards of our institutional human research ethics committee as well as the basic principles of the protection of the rights and dignity of Human Beings as set out in the Helsinki Declaration[17]. The aim of the study was explained to eligible participants and their consent was obtained before recruitment. Confidentiality was maintained by excluding all identifiers from the questionnaires.

Eighteen questions were used to assess respondents' knowledge of episiotomy guidelines. Correct answers were scored one while incorrect answers were scored zero. The minimum and maximum obtainable scores were zero and 18 respectively. Scores between zeros to six were categorized as poor; 7 to 12 as average; and more than 12 as good.

Eight questions assessed third-stage perineal practices. Scores greater than four were regarded as good practice while four or less signified poor practice. The questionnaire was pre-tested among 20 midwives and corrections were made to unclear questions before the study. Data were analysed using SPSS version 20.0 (Statistical Product and Service Solutions, Inc. Chicago, III). Proportions and percentages were calculated for categorical variables while mean and standard deviation were used for continuous variables. Factors affecting knowledge and practice were also examined using the Pearson Chi-square test and Fischer's exact test as appropriate. P-values less than 0.05 were considered statistically significant at a 95% confidence interval.

RESULTS

All 280 nurses and midwives completed the questionnaire correctly and the response rate was 100%. Most respondents (31.8%) were aged 40-

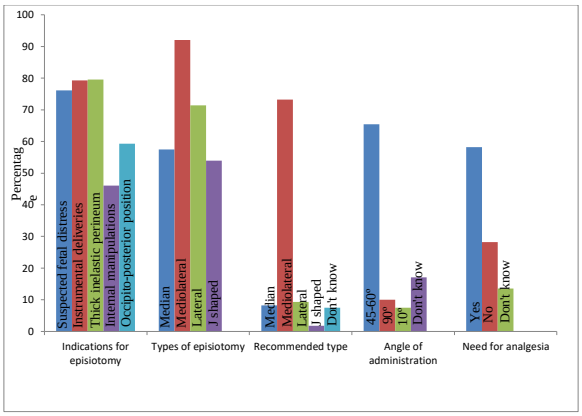

Figure 1: Knowledge of current episiotomy guidelines

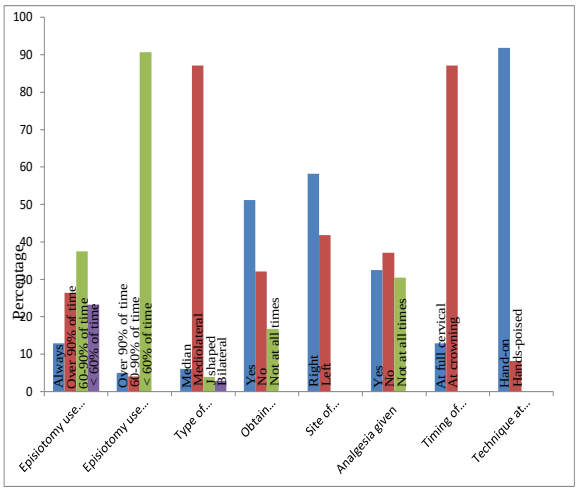

Figure 2: Second stage perineal practices

49 years; 65% had post-basic or Bachelor of Nursing qualifications while 28.2% and 32.1% of respondents had worked at the maternity unit for 1-5 and 6 -10 years respectively. Figure 1 shows midwives' knowledge of episiotomy guidelines. Almost four in five respondents mentioned thick inelastic perineum, avoidance of 3rd and 4th-degree tears and instrumental delivery as recommended indications for episiotomy.

Table 1: Association between midwives' characteristics and knowledge of episiotomy guidelines

	Poor	Good	Statistics
Age group (Years)			
<30	30(40.5)	44(49.5)	p=0.426
30-49	28(34.6)	53(65.4)	
40-49	28(31.5)	61(68.5)	
≥50	10(27.8)	26(72.2)	
Educational level			
Basic nursing	27(42.2)	37(57.8)	p=0.447
Post basic nursing	30(33.0)	61(67.0)	
HND	4(26.7)	11(73.3)	
B.Sc	31(34.1)	60(65.9)	
M.Sc	4(21.1)	15(78.9)	
Years of practice post-qualification	32(37.2)	54(62.8)	p=0.072
1-5	5(14.3)	30(85.7)	
6-10	25(42.4)	34(57.6)	
11-15	18(31.6)	39(68.4)	
16-20	16(37.2)	27(62.8)	
≥21			
Designation			
Nursing officer	24(41.4)	34(58.6)	**p=0.002***
Senior Nursing officer	10(21.7)	36(78.3)	
Principal Nursing officer	24(49.0)	25(51.0)	
Deputy Chief Nursing Officer	25(41.0)	36(59.0)	
Chief Nursing Officer	13(19.7)	53(80.3)	
Experience in maternity care (years)	28(35.4)	51(64.6)	**p<0.001***
1-5	22(24.4)	68(75.6)	
6-10	25(48.1)	27(51.9)	
11-15	21(61.8)	13(38.2)	
16-20	0(0.0)	25(100.0)	
≥21			
	18(18.8)	3(1.6)	**p<0.001***
Knowledge of episiotomy guidelines	57(59.4)	101(54.9)	
Poor	21(21.9)	80(43.5)	
Fair			
Good			

*significant, F=Fischer's exact test

Figure 2 shows the third-stage practices of respondents. Over a third (39.3%) of nurses admitted to performing episiotomy at the minimum, in nine out of 10 nulliparous women. Medio-lateral episiotomy type was administered by 87.3% of respondents but fewer (73%) knew it as the recommended type. About 50% obtained clients' consent before giving episiotomy; merely 32.5% administered local analgesia while a majority

Table 2: Association between midwives' characteristics and second stage perineal practices

	Poor	Fair	Good	Statistics
Age group (Years)	1(1.4)	59(79.7)	14(18.9)	**p<0.001***
<30	11(13.6)	34(42.0)	36(44.4)	
30-49	6(6.7)	50(56.2)	33(37.1)	
40-49	3(8.3)	15(41.7)	18(50.0)	
≥50				
Educational level	8(12.5)	39(60.9)	17(26.6)	**p=0.003***
Basic	11(12.0)	47(51.6)	33(36.3)	
nursing	0(0.0)	14(93.3)	1(6.7)	
Post basic	2(2.2)	49(53.8)	40(44.0)	
nursing	0(0.0)	9(47.4)	10(52.6)	
HND				
B.Sc				
M.Sc				
Years of practice	3(3.5)	56(65.1)	27(31.4)	**p<0.001***
post-qualification	4(11.4)	7(20.0)	24(68.6)	
1-5	8(13.6)	29(49.2)	16(28.1)	
6-10	1(1.8)	40(70.2)	12(27.9)	
11-15	5(11.6)	26(60.5)		
16-20				
≥21				
Designation				
Nursing	3(5.2)	39(67.2)	16(27.6)	**p<0.001***
officer	0(0.0)	22(47.8)	24(52.2)	
Senior	11(22.4)	20(40.8)	18(36.7)	
Nursing	1(1.6)	36(59.0)	24(39.3)	
officer	6(9.1)	41(62.1)	19(28.8)	
Principal Nursing officer				
Deputy Chief Nursing Officer				
Chief Nursing Officer				
Years in maternity	9(11.4)	41(51.9)	29(36.7)	**p=0.004***
care	2(2.2)	50(55.6)	38(42.2)	
1-5	7(13.5)	22(42.3)	23(44.2)	
6-10	3(8.8)	24(70.6)	7(20.6)	
11-15	0(0.0)	21(84.0)	4(16.0)	
16-20				
≥21				

(91.8%) practised hands-on perineum to prevent perineal injury. Overall, 92.5% had average to good knowledge of episiotomy guidelines while only 65.7% had good second-stage perineal practices.

Ssignificant associations were found between respondents' knowledge of current episiotomy guidelines and age; the total number of years of practice; designation; educational level and the number of years of experience in maternity care (Table 1).

Second Stage practice was significantly associated with midwives' designation (p=0.002), duration of labour ward experience (p<0.001) and overall knowledge of episiotomy guidelines (p<0.001) as shown in Table 2. Inadequate training in techniques to keep the perineum intact, impatience with foetal head at crowning and fear of perineal lacerations were proffered for liberal episiotomy use among respondents.

DISCUSSION

Our study revealed that majorities (92.5%) of the midwives had an average to good knowledge of episiotomy guidelines while fewer (65.7%) had good second-stage perineal practices. There was a preponderance of relatively young midwives with two in three being younger than 40 years. The modal qualifications were post-basic nursing and Bachelor of nursing degree. This is a vibrant workforce that is likely to be receptive to new evidence. Regular updates of the knowledge base and high standards of practice are expected of this group; it is therefore not surprising that as many as 92.5% had an average to a good overall knowledge of current episiotomy guidelines.

Midwives' knowledge and practice impact the health care of women in labour by preventing complications and enhancing positive birth experiences.[18] High mean scores in nurse/midwives' knowledge of second-stage practice have been previously reported, [4] and recently a mean episiotomy knowledge level of 4.15 out of 6.[19]

Our study confirms previous reports that health professionals still perform episiotomy frequently in primigravidae though less often in multiparae[1] and prevention of OASIs is consistently given as a reason.[20] In our cohort, 37.5% of respondents admitted to performing routine episiotomy more than 60% of the time in primigravidae despite evidence-based recommendations [7,21] on restrictive episiotomy use. This is higher than the 28.44% reported in a recent Chinese study; though the current episiotomy rates documented in Nigeria vary widely from 9.3% to 40.1% [22–25].

Where an episiotomy is indicated, the mediolateral technique is recommended, with careful attention to ensure that the angle is 60 degrees away from the midline when the perineum is distended[7]. A mediolateral episiotomy appears to have a protective effect on OASIS and should be considered with instrumental deliveries.[7]. For women where an unassisted vaginal birth is anticipated, a policy of selective episiotomy may result in 30% fewer women experiencing severe perineal or vaginal trauma. The accepted indications for episiotomy are foetal distress, delay in the second stage of labour, operative vaginal birth and when thick inelastic perineum is threatening to tear. For an operative vaginal birth, episiotomy should be considered for all forceps births, regardless of parity, and for all vacuum-assisted births in primiparous women. Our study confirms that LASUTH midwives like other healthcare professionals perform episiotomy more often in primigravidae than multiparae[1] and prevention of OASIs has been consistently stated as a reason.[4] Lack of training was also reported as a major hindrance to reducing episiotomy rates.

Two-thirds of the respondents (65.7%) had good overall second-stage perineal practices. Nine in ten (91.8%) reported the use of hands-on or manual perineal protection (MPP) which is higher than 61.7% reported in Australia.[26] In South Whales, 83.4% of midwives employed 'hands-on' when apprehensive about an impending OASI yet 63.0% reported a preference for hands-off' in low-risk births.[27] The hands-on practice of midwives in LASUTH may reflect their training or adoption of new evidence.

Though a Cochrane review showed that hands-off techniques may reduce the number of episiotomies, it was not clear if these techniques had a beneficial effect on other types of perineal trauma.[12] To date, randomized controlled trials, have not provided evidence in support of MPP,[28] however, observational studies have demonstrated that both hands on the foetal head and perineal support were associated with a reduced risk of OASI.[29] Effective protection of the perineum from trauma is achieved when the thumb and index finger were applied 12 cm apart, 2 cm anterior to the posterior fourchette and approximated medially by 1 cm on either side.[30]

Additionally MPP facilitates the delivery of the foetal head with the least possible diameter.

Good perineal practices were significantly associated with midwives' designation (p=0.002), duration of nursing experience (p<0.001) and knowledge of episiotomy guidelines (p<0.001). Other techniques like warm compresses and perineal massage were not assessed in our study as they are hardly practised in LASUTH. However, in a recent meta-analysis, warm compresses applied during the second stage of labour increase the incidence of intact perineum and lower the risk of episiotomy and severe perineal trauma.[31] The Cochrane reviews also found that massage and warm compresses may reduce serious third- and fourth-degree tears.[12]

Lack of training was reported as a major hindrance to reducing episiotomy rates; about 53.6% claimed they were not trained on techniques to keep the perineum intact while 52.1% were impatient for the perineum to stretch due to the work pressure in the labour ward. The difficulty in changing well-established obstetric habits regarding episiotomy practice has also been described by Klein et al.

Our study confirms previous reports that health professionals still perform episiotomy frequently in primigravidae though less often in multiparae[1] and prevention of OASIs is consistently given as a reason.[20] As in our study, a high mean score in nurse/midwives' knowledge of second-stage practice has been previously reported. [18] Midwives' knowledge impacts the health care of women by preventing labour complications which enhances a positive birth experience.[20]

Strength and Limitation

This hospital-based survey did not observe participants' actual performance and there might be disparities between what is reported and what is practised. A larger sample size might have provided additional power.

CONCLUSION

Nurses are sufficiently familiar with the current evidence and guidelines regarding episiotomy. Overall, second-stage perineal practices were good among a reasonable proportion of nurses. Inadequate training in techniques to keep the perineum intact, impatience with foetal head at crowning and fear of perineal lacerations are the main reasons given by respondents for the high rate of episiotomy reported. There is a need to improve perineal practices to reflect nurses' knowledge of current evidence-based recommendations.

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Conflicts of Interest: None to declare.

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