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PERCEPTION AND ACCEPTABILITY OF CERVICAL RIPENING AND INDUCTION OF LABOUR AMONG WOMEN ATTENDING ANTENATAL CARE IN USMANU DANFODIO UNIVERSITY TEACHING HOSPITAL, SOKOTO

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ABSTRACT

Background: Induction of labour is the one of the most important intervention in obstetrics practice. It is the initiation of uterine contraction after age of viability with intact foetal membranes with the aim of achieving vaginal delivery. **Aim of The Study:** The aim of this study was to assess perception and acceptability of cervical ripening and induction of labour among women attending antenatal care at Usmanu Danfodiyo University Teaching Hospital, Sokoto. **Methodology:** This was a cross-sectional study involving 316 pregnant women seen at the Usmanu Danfodiyo University Teaching hospital Sokoto from 1st June to 31st August 2017. They were interviewed using self/interviewer administered questionnaire. The questionnaire contained items on socio-demographic characteristics, reproductive profile, and assessments of awareness, perception and acceptability of cervical ripening and induction of labour. Data analysis was done using SPSS version 22 (SPSS Inc, Chicago, IL, USA). Level of significance was set at $p < 0.05$. **Results:** The majority of respondents were between 25 and 29 years; among them 63.3% were Hausa and 70.6% were Muslims. Most of the respondents were multigravidae. Majority of the respondents (73.1%) were aware of cervical ripening and induction of labour. Their main source of information was from their friends. Overall perception was 64.6% and only 31.6% were willing to accept the procedure if indicated. Most respondents (54.2%) would reject the procedure because they thought it was painful. **Conclusion:** The awareness of cervical ripening and induction of labour was good but the perception and acceptability of the procedure was low among the women attending antenatal care at Usmanu Danfodiyo University Teaching Hospital. Regular and proper counselling is recommended in order to correct wrong perceptions and to further increase acceptability of cervical ripening and induction of labour when indicated.

KEYWORDS: Cervical ripening, Induction of labour, Nigeria.

INTRODUCTION

Induction of labour is the one of the most important intervention in obstetrics practice.[1] It is defined as initiation of uterine contraction after the age of viability with intact foetal membranes and before the onset of natural labour by medical and /or surgical means to accomplished vaginal delivery.[1,2] The aim of induction of labour is to achieve vaginal delivery in an ideal time interval of not less than 3 hours and not more than 16 hours in a pregnancy where the risk of continuation of pregnancy to the foetus is adjudged to be greater than the risk of extra uterine life.[2] Beyond 41 weeks of gestation induction is associated with small reduction in perinatal deaths and meconium aspiration.[2-4]

The incidence of induction of labour is variable, it ranges from 3-20% of all deliveries and depends on the capacity to monitor and diagnose antenatal foetal problems.[2,5,6] It is higher in USA and UK with incidence of 20%, then 4.4% in Africa and 12.1% in Asia.[5,7,8]

The main indications for induction of labour are prolonged pregnancy and hypertensive disorders in pregnancy.[7] Other maternal indications include placental abruption with dead foetus, premature rupture of membrane, chorioamnionitis, polyhydramnios, diabetes mellitus, chronic hypertension, and renal disease.[1,2] Some foetal indications include haemolytic disease, intrauterine growth retardation, foetal death and foetal abnormality.

Ideally the agents used for cervical ripening should be effective within 24 hours, simple non-invasive and must not stimulate labour excessively and must not compromise the mother or the foetus.[9] Prostaglandin or its analogues (prostaglandin E2 and E1) are currently most used followed by osmotic dilators and Foley's

catheter.[1,2,5,6] Sweeping membrane by stripping of the foetal membrane will cause local release of prostaglandin and also excite release of maternal oxytocin, this make spontaneous labour more likely and so reduced the need for formal induction of labour to prevent prolonged pregnancy.

The aim of this study was to determine the awareness, perception and acceptability of cervical ripening and induction of labour among pregnant women attending antenatal care at Usmanu Danfodiyo University Teaching Hospital (UDUTH), Sokoto.

METHODOLOGY

This was a cross-sectional study conducted among pregnant women attending antenatal clinic at Usmanu Danfodiyo University Teaching Hospital, Sokoto. Respondents were selected during each antenatal clinic by simple random sampling using balloting. Verbal consent with a right to opt-out was obtained after assurance of confidentiality**.** All consented pregnant women attending ANC at UDUTH irrespective of their parity and gestational age were included. Those who did not give consent were excluded from the study. Sample size of 363 was obtained and 316 respondents had complete information. The information obtained was analysed using SPSS version 22. Descriptive statistics was displayed in number and percentages. Chi- square test was used to determine association and a *p*-value <0.05 was considered significant.

RESULTS

A total of 363 women were informed about the study and invited to participate; 316 respondents consented, while 37 refused to answer the questions and 10 questionnaires were lost. The mean age of respondent was 27.5 ± 4.8 years and 37.7% of them were within the age range of 25 – 29 years. Majority of respondent were Hausa (63.3%) and Muslims (70.6%). About 36% of the respondents had tertiary level of education. Many respondents were unemployed (40.8%) and only 17.7% were civil servant. However, most of their spouses (50.6%) were civil servant. The details in sociodemographic characteristics are shown in Tables 1.

Table 1: Socio-demographic characteristics of the patients.

Characteristics	Frequency	Percentage (%)
Age		
Less than 20 years	10	3.2
21 to 24 years	79	25.0
25 to 29 years	119	37.7
30 to 34 years	73	23.1
35 and above	35	11.0
Tribe		
Hausa	200	63.3
Yoruba	74	23.4
Igbo	25	7.9
Others	12	3.8
Religion		
Islam	223	70.6
Christianity	81	25.6
Others	12	3.8
Occupation		
Unemployed	129	40.8
Civil servant	56	17.7
Trader	98	31.0
Student	33	10.5
Educational status		
No formal education	31	9.8
Primary	65	20.6
Secondary	107	33.9
Tertiary	113	35.8
Educational status of spouse		
No formal education	20	6.3
Primary	25	7.9
Secondary	91	28.8
Tertiary	180	56.9

About 73% of the respondents have heard about cervical ripening and induction of labour and almost 75% of them got the information about the procedures from their friends, while 21.6% obtained it from health workers during antenatal health talks. This is shown in figures 1 & 2.

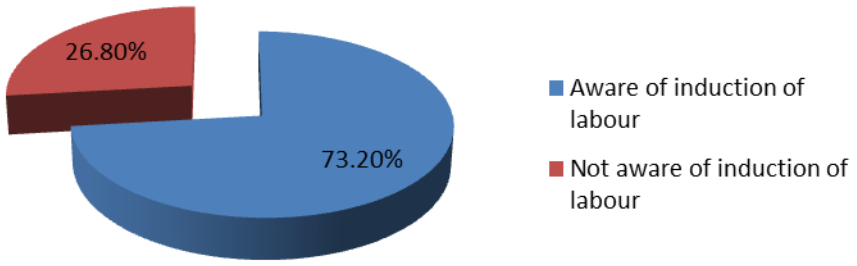

Figure 1: Awareness on cervical ripening and induction of labour among the respondents.

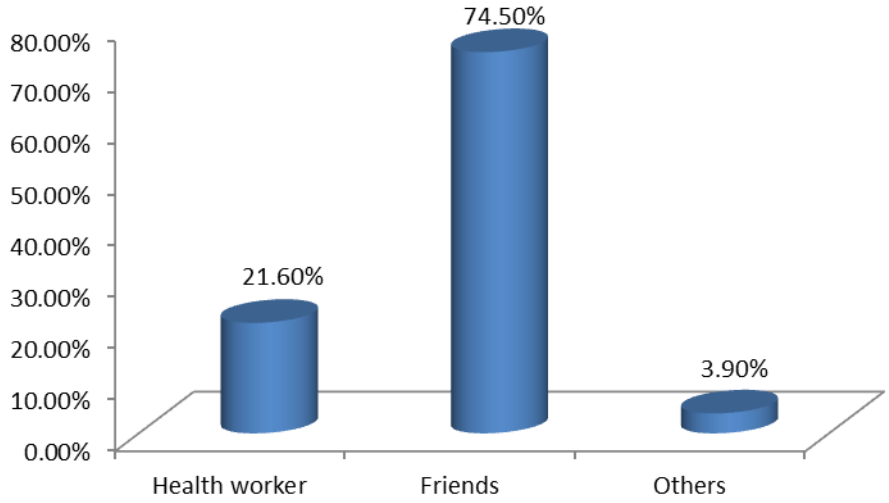

Figure 2: Source of awareness on cervical ripening and induction of labour among the respondents.

Majority of the respondents (64.6%) have poor perception on cervical ripening and induction of labour.

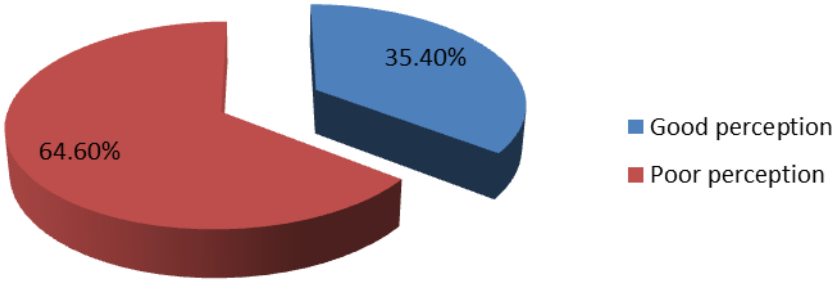

Figure 3: Perception on cervical ripening and induction of labour among the respondents.

Among all respondents, only 31.6% would accept the procedure and 63.3% would not encourage someone to accept it even when indicated. The various reason for the low acceptance are shown in figure 4.

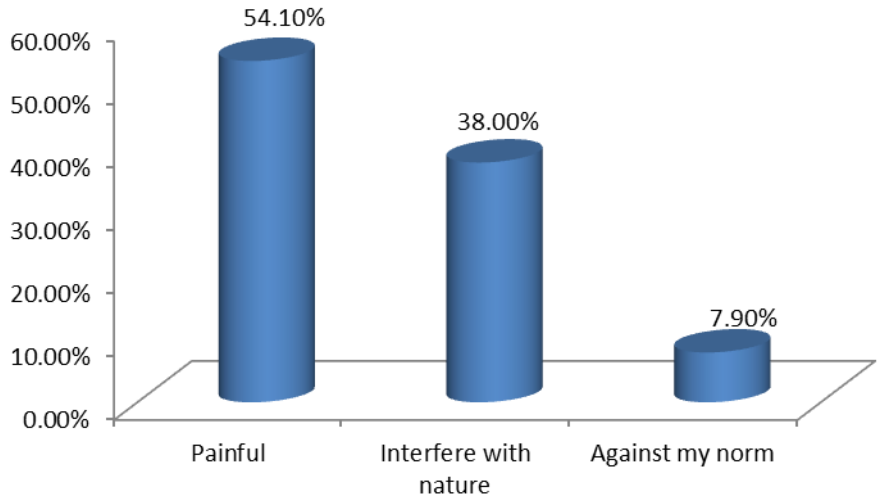

Figure 4: Reasons for low acceptance of crevical ripening and induction of labour.

The result showed that there was no statistically significant association between perception and sociodemographic charecteristics of respondents. This is shown in Table 2.

Table 2: Factors associated with perception about cervical ripening and induction of labour among the respondents.

Characteristics	Poor perception n (%)	Good perception n (%)	*p* value
Tribe			
Hausa	135 (67.5)	63 (32.5)	
Yoruba	47 (63.5)	27 (36.5)	0.276
Igbo	14 (56.0)	11 (44.0)	
Others	8 (47.1)	9 (52.9)	
Occupation			
Unemployed	88 (68.2)	41 (31.8)	
Civil servant	37 (66.1)	19 (33.9)	0.298
Trader	58 (59.18)	40 (40.8)	
Student	21 (63.6)	12 (36.4)	
Occupation of spouse			
Unemployed	2 (50)	2 (50)	
Civil servant	109 (68.1)	51 (31.9)	0.442
Trader	84 (60.43)	55 (38.9)	
Student	9 (69.2)	4 (30.8)	
Educational status			
No formal education	19 (61.3)	12 (38.7)	
Primary	32 (56.9)	28 (43.1)	0.164
Secondary	67 (62.6)	40 (37.4)	
Tertiary	81 (71.7)	32 (28.3)	
Educational status of spouse			
No formal education	11 (55.0)	9(45.0)	
Primary	18 (72.0)	7 (28.0)	0.691
Secondary	55 (60.4)	36 (39.6)	
Tertiary	12 (66.7)	60 (33.3)	

The result depicted below showed statistically significant association between acceptability and both occupation and educational status of the respondent and their spouses. However; there was no significant association

between perception of the respondents and their acceptability of cervical ripening and induction of labour.

Table 3: Factors associated with acceptability of cervical ripening and induction of labour.

Factors	Acceptability		*p* value
	Yes n (%)	No n (%)	
Tribe			
Hausa	68(34.0)	132(66.0)	0.080
Yoruba	15(20.3)	59(79.7)	
Igbo	11(44.0)	14(56.0)	
Others	5(29.4)	12(70.6)	
Occupation of respondent			
Unemployed	28(21.7)	101(78.3)	<0.001
Civil servant	36(64.3)	20(35.7)	
Trader	20(20.4)	70(78.6)	
Student	15(45.5)	18(54.5)	
Occupation of the spouse			
Unemployed	1(25.0)	3(75.0)	0.001
Civil servant	63(39.4)	97(60.6)	
Bussiness	29(20.9)	110(79.1)	
Student	6(46.2)	7(53.8)	
Educational status of the respondent			
No formal	7(22.5)	22(77.5)	<0.001
Primary	11(16.9)	54(83.1)	
Secondary	25(23.4)	82(76.6)	
Tertiary	56(49.6)	57(50.4)	
Educational status of the spouse			
No formal	5(25.0)	15(75.5)	<0.001
Pimary	3(12.0)	11(91.7)	
Secondary	16(17.6)	75(82.4)	
Tertiary	75(41.7)	105(58.3)	
Perception			
Poor	60(29.1)	144 (70.9)	0.362
Good	40 (35.7)	72 (64.3)	

DISCUSSION

The sociodemographic characteristics are consistent with the characteristics of the study population. High number of about 36% of the respondent had tertiary level of education but most of them were unemployed. Few number of the respondent (9.8%) have no formal education. In this study, the awareness of cervical ripening was high and this could be due to high level of education within the study participants. This could be associated with their level of education that allows free interaction with friends and relatives. This is almost similar with the another study done in Ibadan that reported 71% awareness.[10] But it was higher than 51.8% that was reported in Egypt.[11]

Since all the respondents were recruited from the antenatal clinic, it was expected that the source of information, for the majority should be from the health personnel as seen in Ibadan,[12] However, only 21.6% of the participant that heard about the procedure during health talks and majority of respondents got the information from their friends and relatives.

Although awareness of cervical ripening and induction of labour is higher among the respondents, the overall perception was poor. Their perceptions could be related to the content of health education sessions, consultations in the clinic or problems associated with recall. The perception was poor probably because the participants heard about the procedure through friends that may not be medical personnel. About 10% perceived that cervical ripening and induction of labour would reduce caesarean section rate and believed it made work easier for doctors and nurses. This is comparable to what was obtained in Ibadan.[12]

There is no statistically significant association between perception and tribe, educational status and occupation

of the study group and their spouses. This indicates that their poor perception was not due to educational status or occupation.

In this study, 58.5% participants considered that labour following induction (IOL) was more painful than spontaneous labour. This is similar to what was reported in Ibadan and Egypt.[11,12] However, it is higher than what was found in a survey done in United Kingdom were 45% of women considered that induced labour was more painful than expected.[13] This may not be unrelated to the limited options for analgesia in labour in resource-constrained settings in developing countries like Nigeria.[12] Studies on pain perception in Ibadan and Enugu have found that women who have their labour induced should benefit from analgesia.[14,15] In this study, some of the participants believed that the procedure interfere with natural labour process.

The acceptability of cervical ripening and induction of labour in this study is low. Only 31.6% would accept the cervical ripening and induction of labour if indicated. This is comparable to what was obtained in United Kingdom survey in which only 17% of women would prefer to be induced again.[16] Only 36.7% of all respondents would recommend induction of labour to a friend or relative, however, in a study conducted in Ibadan reported that 68% would accept cervical ripening and induction of labour and 82% would encourage friends and relatives to undergo the procedure.[12]

There were statically significant association between acceptability of cervical ripening and induction of labour with socioeconomic and educational status of both respondents and their spouses. It shows that those who had tertiary level of education and are civil servants or students were more likely to accept cervical ripening and induction of labour.

CONCLUSION

In conclusion, the overall awareness of the respondents on cervical ripening and induction of labour is good while, perception and acceptability were sub-optimal. There is significant association between acceptability of cervical ripening and induction of labour with socioeconomic and educational status of both respondents and their spouses.

RECOMMENDATION

Women should receive an accurate information concerning induction of labour that includes the reasons, methods, and options. Health care professionals should explain to women being offered induction of labour the reasons for the procedure, when, where and how it could be carried out. There should be arrangements for support and pain relief during the procedure.

CONFLICT OF INTEREST

We declare no conflict of interest.

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