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**Traditional Birth attendants and Associated Factors
among Pregnant Mothers in Selected Communities of
Arua District in Northern Uganda: A Case Study of
Vurra Sub-county**

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ABSTRACT

Despite local populations' sensitization and level of knowledge, traditional birth attendants (TBAs) are increasingly being used in developing countries. In most societies, TBA use has been linked to higher maternal death rates. A cross-sectional descriptive and analytical investigation was conducted. After obtaining informed consent from study participants, a standardized questionnaire was used to collect data. 372 participants were chosen on purpose, and data was collected by all group members. STATA 14.1 was used for statistical analysis, which included univariate and multivariate Robust Poisson regression analysis. The average age of research participants was 32. The majority of the participants were business professionals, and 13% had to go more than 5 kilometers to get to a health institution. TBA consumption reached 58% in some cases. Participants who had to walk more than 5 kilometers to the health facility were 2.3 times more likely to use TBA than those who had a health facility within a 1km radius, PR=2.3, 95%CI 1.5-3.5. Participants who were influenced by family were more likely to use TBA in this community than their counterparts who made prenatal decisions on their own. TBA use is quite high in rural Northern Uganda, particularly in Vurra Sub County, where lengthy distances to health facilities induce rural residents to use TBA. More health facilities, as well as more trained workers, are still required in isolated areas of Northern Uganda. Sensitization and education of the community are required to have concrete self-decision-making.

Keywords: utilization, traditional birth, pregnant mothers

INTRODUCTION

A Traditional Birth Attendant is a person who assist the mother (pregnant woman) during childbirth and initially acquired her skills by delivering babies herself (personal experience) or through apprenticeship working with other TBAs. They are integral members of their community and provide important window to local costumes, traditions and perceptions regarding childbirth and newborn care [1, 2]. Services provided by some TBAs may be limited to social support while others provide full antenatal, intrapartum and post-natal care mediated by indigenous cultural knowledge, medicines and skills usually acquired through apprenticeship to other TBAs [3, 4]. Globally, over half a million reproductive age women (15-49) died every year from pregnancy and child birth complications and 300 million women suffered from debilitating injuries. 80-90% of these problems were estimated to be avoidable. In Haiti, only 37.1% of birth took place in health facilities. Haiti had the highest maternal mortality rate in the western

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hemisphere with 350 deaths per 100,000 live births. From August 2012–April 2013, USAID trained over 2300 TBAs to lower the maternal mortality rate and bridge a gap between underserved communities and a health care system [5, 6, 7].

Maternal mortality rate in Ethiopia was the highest in the world with an estimated maternal mortality rate of 676 deaths per 100,000 live births in 2011. Targets were set at the international conference on population and development (ICPD) to have more than 80% deliveries conducted by skilled birth attendants instead of TBAs [5, 8]. In the developing world, maternal and infant morbidity still remain a global concern most especially in many sub-Saharan African countries [9]. Estimates show that there are more than 500 maternal mortalities out of every 100,000 births in most African countries and deliveries conducted by TBAs have been shown to be associated with four times higher morbidity and mortality when compared to the deliveries supervised by midwives and other health professionals [9]. Kenya's government made maternal health care free in 2013. The goal was to save lives by encouraging women to deliver in the hospitals but most women were not satisfied by the quality of care in the health service system and they chose to return to the TBAs [10]. Kenya registered the highest maternal mortality rates in the world at 488 maternal deaths per 100,000 live births [11].

Interventions in training TBAs were made as a means of extending healthcare services to underserved communities in developing countries hoping to decrease maternal morbidities. However, studies had shown conflicting results in maternal outcomes. TBAs contributed to successful maternal, neonatal and child health interventions, but had been unsuccessful in handling obstetric complications [12]. Without modern training on how to attend to pregnant women, TBAs were unable to recognize and respond to complications of pregnancy and child birth. Training TBAs had been a strategy to improve maternity healthcare in developing countries in Africa, however, for the above reasons, WHO and UNICEF recommended a shift towards skilled birth attendants [13, 14, 15, 16]. In Uganda the policy towards TBAs shifted according to the recommendations of WHO and the safe motherhood initiative. Promotion of skilled birth attendants whose definition excluded TBAs became the official policy leading to the suspension of the previously existing partnership between government and TBAs across the country. The Uganda government recommended terminating collaborations between NGOs and TBAs as well. It held that the trained TBAs would be included in the newly formed village health teams (VHTs) if their respective communities selected them [17, 18, 19].

METHODOLOGY

STUDY DESIGN

This study used a descriptive [20] cross sectional study which employed both qualitative and quantitative study designs. This was selected because it assisted in easy access of the required data for the study which enabled a quicker assessment of the level of mother's education, cultural practices and the accessibility to health facility considering their influence to child birth under traditional birth attendants among mothers in Arua District.

STUDY AREA

The study was carried out at Vurra sub county, Arua district in West Nile region of Northern Uganda.

STUDY POPULATION

All mothers in Vurra sub county Arua district who accepted to take part in the study and those signed a written consent form.

INCLUSION CRITERIA

All women in Vurra sub county homesteads that had given birth to one child or more and agreed to the consent were recruited in the study.

EXCLUSION CRITERIA

All women under reproductive age and mothers who did not consent were excluded from the study.

SAMPLE SIZE DETERMINATION

Using Kish Leslie formula for cross sectional studies

$$N = \frac{Z^2 P(1-P)}{E^2}$$

By (Dr, Ofumbi, & Ch, 2009)

N= sample size estimate of mothers who deliver were delivered by traditional birth attendants and those with positive attitude towards the work done by traditional birth attendants managed who have consented.

P= assumed true population of mothers who delivered in Vurra sub county (65%)

Standard deviation was at 95% confidence interval (1.96)

Margin of error was at 5%.

The calculated sample size is $N = \frac{1.96^2 0.75(1-0.75)}{0.05^2}$

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The sample size for this research was **350 mothers**.

SAMPLING PROCEDURES

The study used purposive sampling technique to households with mothers who have ever given birth.

DATA ANALYSIS

Collected data was analyzed using IBM Statistical Package for the Social Sciences (SPSS version 25) and the results for each objective was tabulated and compared using univariate, bivariate and multivariate relationships to assess specific attributes.

The content/ qualitative results especially from interviews were quoted and used together with the quantitative results obtained from the study.

ETHICAL CONSIDERATION.

An introductory letter was obtained from the Dean of the faculty of Clinical medicine and Dentistry KIU-WC and permission to carry out the study was got from the Arua District Health Officer. Verbal and written consent from the respondents was sought for and they were assured 100% confidentiality for all the information dispensed by them. Participation of the respondents were completely voluntary without any bribery aids or cohesion for further participation [21].

RESULTS

Table 1: Sociodemographic characteristics of study participants in Vurra sub county Arua District in Northern Uganda.

A total of 372 participants were involved in data collection with a median age of 32 (27-41years). More people were married 87.6 % (326) with a median age of marriage of 21years (19-24) and the least number were widowed 0.8% (03). Most families were of the nuclear type; 258 compared to the extended type; 114 with the median household size of 6(4-9) and the median children number of; 3(2-5). Most level of education attended was, Primary with 150 (40.3%) members and the least was of those that did not attend school; 33(8.9%) members. Peasants were the most number of people in Vurra sub county, Arua district with the number of 142 (37.1%) and the least were the TBAs with 0.8%. Amongst the people reached, Catholics had a highest number of 132 (35.5%) with the least being those without any religion 0.3%.The highest number reported to be earning less than 250,000/= ; 220 (59.1%) as the monthly family income with the least number earning greater than 1 Million 22 (5.9%).

Table 1: Sociodemographic characteristics of study participants in selected communities of Vurra sub county, Arua District in Northern Uganda

Variables	Summary measure
Median age (IQR) in years	32 [27-41]
Gender n (%)	
Female	372 (100)
Marital status	
Divorced	37 (10.0)
Married	326 (87.6)
Single	6 (1.6)
Widow	3 (0.8)
Median age of marriage (IQR)	21 [19-24]
Family type n (%)	
Nuclear	258 (69.4)
Extended	114 (30.6)
Median household size (IQR)	6 [4-9]
Median children (IQR)	3 (2-5)
Education n (%)	

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None	33 (8.9)
Primary	150 (40.3)
Secondary	101 (27.2)
Tertiary	88 (23.7)
Variables	Summary measure
Occupation n (%)	
Housewife	50 (14.0)
Business	85 (23.7)
Teacher	40 (11.2)
Nurse/midwife	17 (4.8)
Doctor	8 (2.2)
TBA	8 (0.8)
Religion n (%)	
Catholic	132 (35.5)
Anglican	106 (28.5)
SDA	20 (5.4)
Moslem	55 (14.8)
Protestant	58 (15.6)
Others	1 (0.3)
Family income n (%)	
<250,000	220 (59.1)
250,000-<1M	130 (35.0)
>1M	22 (5.9)
Distance from TBA	
<1Km	165 (46.5)
1-5Km	144 (40.6)
>5Km	46 (13.0)

The utilization of traditional birth attendants in this area was v high (58%, 138)

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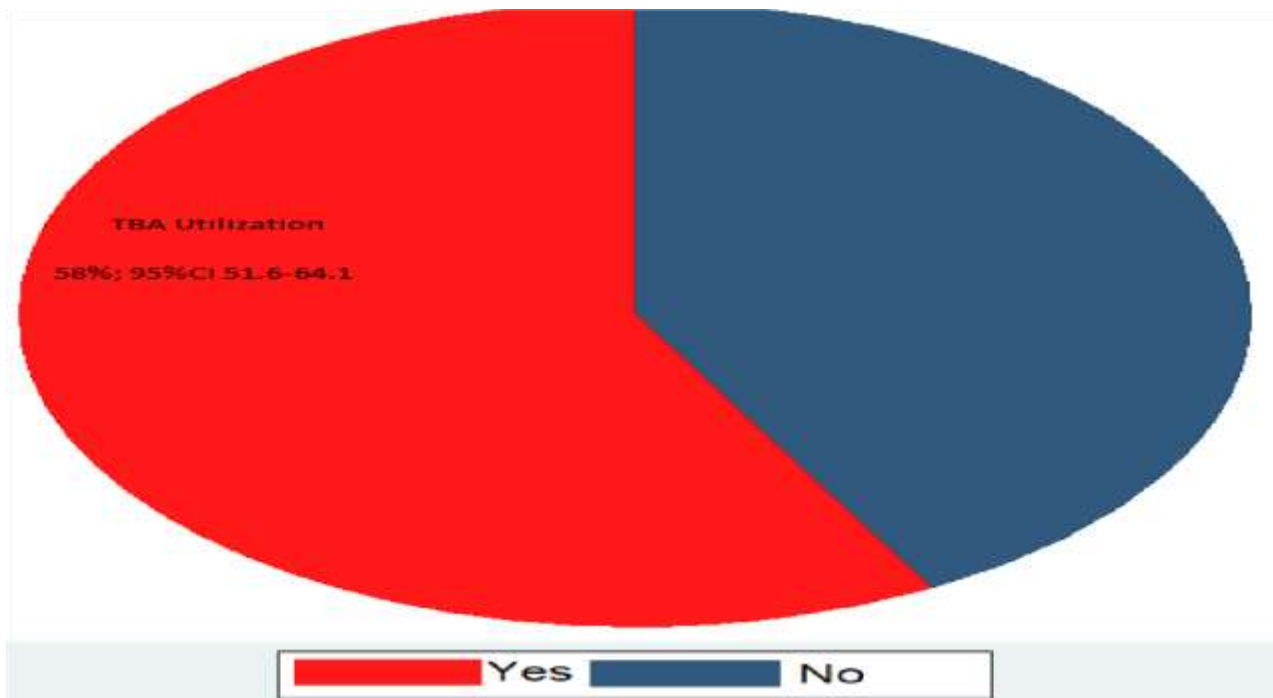


Figure 1: Utilization of TBAs in selected communities of Vurra sub county Arua District.

Table 2; The following factors found to be significantly associated with the utilization of the Traditional birth Attendants in Vurra sub county Arua district; Age, Distance from the health facility, Decision making and Occupation. Respondents who lived at a distance of >5km away from the health facility were 2.31 times more likely to utilize the TBAs than those who lived in <5km (aPR=2.31 95% CI 1.53-3.49). Decision making by the family members were 1.45 times more likely to utilize the TBAs compared to those who took decisions by themselves. (aPR =1.45 95% CI 1.10-1.91). In the study, age was a significant factor (aPR=1.01 95% CI 1.00-1.02). Respondents utilize TBAs irrespective of their age.

Table 2: Factors associated with utilization of TBAs in Vurra sub county Arua District

Variables	Apr	95%CI	P value
Gender			
Female	0.90	0.47-1.70	0.74
Monthly income			
<250,000	1.00		
250,000-<100,0000	1.00	0.79-1.25	0.98
>1000,000	0.90	0.44-1.85	0.78
Variables	aPR	95%CI	P value
Age in years	1.01	1.00-1.02	0.04
Marital status			
Divorced	1.00		
Married	1.06	0.78-1.45	0.71
Single	1.34	0.38-4.73	0.65
Widow	1.34	0.80-2.24	0.26
Marriage age	0.98	0.95-1.01	0.16
Education level			
None	1.0		
Primary	1.96	0.81	1.49
Secondary	1.09	0.76	1.58
Tertiary	1.31	0.81	2.13
Occupation			
house wife	1.00		

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Peasant	0.86	0.67-1.09	0.21
Business	0.83	0.59-1.16	0.27
Variables	aPR	95%CI	P value
Teacher	0.37	0.15-0.93	0.04
nurse/midwife	0.30	0.12-0.79	0.02
Doctor	0.38	0.04-3.34	0.39
TBA	0.80	0.51-1.26	0.34
Religion			
Catholic	1.00		
Anglican	0.78	0.59-1.02	0.07
SDA	1.23	0.77-1.97	0.38
Muslim	1.19	0.89-1.58	0.23
Protestant	0.95	0.69-1.31	0.74
Other	3.97	1.27-12.37	0.02
who decided			
Myself	1.0		
My husband	1.12	0.89-1.41	0.35
My family members	1.45	1.10-1.91	0.01
Variables	Apr	95%CI	P value
Distance from healthy facility			
<1km	1.00		
1-5km	1.65	1.10-2.48	0.35
>5km	2.31	1.53-3.49	<0.001

DISCUSSION

This study noted that the utilization of traditional birth attendants was high in this are (58%, 138/372). This implies that the majority of the mothers prefer to utilize TBA services than the health care facilities. This is similar to a previous study done in Nigeria which stated that women preferred to use TBA services because of the more compassionate care given to them as compared to health care providers [22]. [23] in Western Uganda found out from respondents that, lack of skilled staff at the primary health care level, verbal abuse, neglect, poor treatment in hospitals and poorly understood reasons for procedure, plus health workers views that women were ignorant explained the unwillingness if women to deliver in health facilities. Respondents who were teachers and midwives had a prevalence ratio of 0.37 and 0.30 respectively.(aPR1.77, 95%CI 0.88-3.55). This was slightly lower due to the education acquired. Our findings were the same as by [24] in northern part of Nigeria that most pregnant women that were utilizing the TBAs had a low education level. This is because these participants are ignorant about the importance of attending modern health care services. Since social economic status is known to correlate with occupation, it can be deduced from the study that most of the unemployed or low income earning respondents are unable to afford health care services. As a result, they opt for TBA services which are cheaper and affordable. This is in agreement with the study done by [25] that it is clear that socioeconomic disadvantage has a determinant effect on maternal health and is associated with women's utilization of all health care services. I also found out that mothers whose decisions were determined by the family members were 1.45 times more likely to influence mothers to utilize TBAs as compared to those who had self-decision. (aPR=1.45, 95%CI 1.10-1.91). This is because most societies are traditional and seek the opinion of all family members to make a decision. This is not consistent with a study made by [26] in Zambia that many women in African countries lack decision making capacity and the final decision as to where to deliver rests in the household especially if costs will be incurred. We noted that for every increase in age by 1 unit, there was an increase in the utilization of the TBAs. This is because the mothers gain experience with the increase in parity hence they become comfortable with utilization of the TBAs other than the skilled providers. This is not in line with a study by [27] in Sudan West Darfur, that the elder women prefer to be assisted by the skilled birth attendants since they are told that due to their old age, they could be at a higher risk and therefore should deliver at the health facilities. The women in Vurra continue going to the TBAs with increasing age as long as they never got any complication with them.

CONCLUSION

The utilization of TBAs by pregnant mothers in Vurra Sub County, Arua district is still high. Occupation, decision making, distance from the health facility and age were significant factors that influence TBA utilization.

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