

Utilisation of Maternity Care Services Offered by Traditional Birth Attendants in Chongwe Rural District

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ABSTRACT

Objectives: To explore the services offered by traditional birth attendants (TBAs), determine outcome of deliveries, and to characterize the trained TBAs.

Design: A cross sectional study was carried out in which 140 practicing TBAs both trained (44) and untrained (96) were interviewed. A Backward logistic regression method was used to characterize the trained TBAs.

Main Outcome Measures: Utilization of maternal services offered by TBAs and outcome of deliveries.

Results: The majority of trained (75.0%) compared to untrained (44.8%) TBAs were able to read and write ($p = 0.002$). Most of trained TBAs (61.4%) provided services such as Antenatal care (ANC), Post-natal care (PNC) and conducted deliveries, while almost all the untrained TBAs (93.8%) conducted only deliveries. More trained (40.9%) compared to untrained (20.8%) TBAs attended to deliveries that ended up with Post Partum Haemorrhage (PPH) or infection ($p=0.023$). Respondents who were able to read and write were 74% (OR=1.74; 95%CI 1.06, 2.85) more likely to have been trained TBAs. Further more, TBAs who offered ANC, conducted deliveries as well as providing PNC services were 5.15 (95%CI 2.94, 9.01) times more likely to have been trained. Lastly TBAs who attended to mothers who experienced PPH or infections were 94% (OR=1.94; 95%CI 1.17, 3.23) more likely to have been trained.

Conclusion: TBAs provided maternal services (ANC, Deliveries and PNC) to pregnant women. However, significantly more trained TBAs experienced adverse outcomes of deliveries compared with untrained TBAs. Infection control and immediate referral of complicated cases must be emphasized during TBA training if the maternal mortality rate has to be reduced. Medical supplies must be constantly supplied to the trained TBAs.

Key words: Utilization, maternity care services, Traditional Birth Attendants, Rural district, Zambia.

INTRODUCTION

Traditional birth attendants are a familiar part of the birthing process worldwide. In most developing countries where there is less availability of trained personnel and health facilities, women choose traditional birth attendants (TBAs) because they are the only option. In some cases, even where facilities and personnel are available, it is common for women to choose the services of TBAs because of their culturally appropriate and respectful care¹. Bad treatment during labour at health centres may deter expectant mothers to deliver at such facilities. For example, in a community-based survey in Lusaka, Zambia 21% of the respondents reported being shouted at or scolded during labour by professional midwives². In Ghana, many TBAs reported that they assisted high risk deliveries that they were taught to refer to higher level care because the women refused to be referred citing many reasons among which was fear of disrespectful or painful treatment from medical personnel³. Other reasons for child births to take place outside health facilities are lack of access to institutionalized care, quick means of transport, poor quality of services offered at health facilities, and the availability of cheap and more accessible alternative care providers such as TBAs⁴. In most parts of Asia and Africa, there is only one midwife for every 15,000 births⁵. This leaves 80% of women in developing countries with very limited choices to the type of care during pregnancy and delivery and this trend has continued over the years².

Safe motherhood experts assumed that TBAs, particularly trained attendants could provide the necessary maternity care services in their communities. In order for the TBAs to conduct clean and safe deliveries many countries embarked on training them. The training was aimed at equipping them with the basic skills to conduct clean and safe deliveries. However, trained TBAs were not a substitute for skilled attendants, although circumstances forced a liaison between the two as an interim measure recognising the need for referral to the trained professionals⁶.

Maternal mortality rates in several industrialized countries and developing countries have been reported to vary from 2-17 and 800-2000 per 100,000 live births, respectively ⁷. In Zambia the maternal mortality in the rural areas is 729 per 100,000 live births ⁸. Meanwhile in Kasama and Kaputa districts of Zambia, the maternal mortality rates of 764 and 1549 per 100,000 live births, respectively, have been reported ⁹. In order to reduce maternal mortality rates, Zambia, like many African countries initiated the training program in 1973, whose goal was to reduce the maternal mortality rate. However, the TBA training program experienced a high drop out rate due to wrong selection criteria, lack of support as well as poor recognition by the community ¹⁰. This eventually made more pregnant women to seek the services of untrained TBAs.

The Zambia Demographic Health Survey (ZDHS) of 2001-2002 reported that at national level, skilled attendants attended only 43.4% of deliveries while trained TBAs and relatives/friends assisted 11.5% and 38.2% of the deliveries, respectively ⁸. Furthermore, the ZDHS reported that most of the deliveries in rural areas were assisted by relatives/friends (48.8%), who may not have been trained TBAs ⁸. Elsewhere, in the Philippines with 70% of the population living in rural areas, 49% of all births in the islands in 1972 were assisted by the traditional birth attendants ¹¹, and 69.3% in rural communities in the islands were attended by TBAs¹². Closer to home, 60% of annual deliveries in the Manicaland province, Zimbabwe, occurred in the home under the care of TBAs who were family members¹³. Even in urban settings a significant proportion of women are attended at birth by TBAs. For instance in Addis Ababa, Ethiopia, 44% of births took place at home of which 19% were attended by traditional birth attendants ¹⁴.

Apart from the fact that TBAs conducted about half of the deliveries in rural areas, and were only able to provide ANC to 2.3% of the deliveries at national level in Zambia ⁸, there is paucity of information on the outcomes of the deliveries assisted by TBAs in this country. Sibley and Sipe ¹⁵ reported that TBAs can contribute to the Millennium Development Goal number 4, and as such it was important that TBAs were trained. In 1992, the United Nations encouraged continued promotion of TBAs, when shortages of midwives existed and prenatal care and delivery services were lacking ¹⁶. The current study was conducted to explore the services offered by TBAs, determine outcomes of deliveries, and to characterize the trained TBAs in Chongwe rural district of Zambia.

METHODS

Study Design

A cross-sectional study was conducted to provide information on utilisation of trained TBAs.

Study site

The study was conducted in Chongwe district, one of the rural areas of Zambia. Chongwe district is located 46 km east of Lusaka. According to the records available at the district health office, Chongwe district had a population of 145,000 people of whom 31,900 were women in the reproductive age range 15-49 years. The highest referral facility in the district was Chongwe Rural Health centre. However the centre did not provide Essential Obstetric Care (EOC) because there was no operating theatre or an Obstetrician/Gynaecologist to attend to obstetric emergencies. Mothers with obstetric emergencies who were brought to the centre had to be referred to the University Teaching Hospital in Lusaka. There were only 19 delivery sites and one referral rural health centre. The district had a ratio of one midwife to 1,063 women.

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The district was conveniently selected as it was the nearest rural district to Lusaka. All 184 registered and practising TBAs (trained and untrained) identified around the 24 health centres in the district were considered to be enrolled into the study.

Sample selection

All registered and practising TBAs who were present during the time of data collection were requested to participate in the study.

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Structured questionnaires were used for interviews. Both closed and open-ended questions were utilised for collecting data. The questions to the TBAs included demographic characteristics; length of stay in the community and formal educational level; the type of services offered; whether trained or untrained; number of deliveries attended in the previous year; whether any of the deliveries attended had complications, and type of complications.

Data processing and analysis

Raw data were first edited for completeness and accuracy. Open-ended questions were post-coded before data was entered using Epi Info. The same software was used for bivariate analyses. The Chi-squared test was used to compare proportions between trained and

untrained TBAs. Meanwhile the Backward logistic regression was used to characterize the trained TBAs.

Definitions

- *Untrained Traditional Birth Attendant* in this study was the indigenous midwife who practiced primarily within the traditional ethnic or cultural group who had had no training to upgrade her skills but was recognized by women and the Health Centre staff.
- *Trained traditional birth attendant* in this study was one who had received a short course of training through the modern health care sector to upgrade her skills in conducting clean and safe deliveries.
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Ethical considerations

Ethical clearance was granted by the University of Zambia, Research Ethics Committee and approval to carryout the study was granted by the Directorate of Research and Graduate Studies of the University of Zambia. Permission to conduct the study was sought from the Chongwe district Director of Health. All respondents consented before participating in the study.

RESULTS

Out of 184 practicing TBAs in the district, 140 (44 trained and 96 untrained TBAs) were interviewed for the study, giving a response rate of 76%.

Social demographic characteristics of TBAs

Table 1 shows the socio-demographic characteristics of the TBAs. No significant differences between trained and untrained TBAs were observed in terms of the distribution of age, marital status, number of children and duration of stay in the community. The majority of the TBAs were of age 40 years or more (67.1%), married (95.7%) with more than 5 children (56.4%) and had stayed in the community for more than 5 years (82.1%). Significantly more trained (75.0%) than untrained (44.8%) TBAs were able to read and write.

Table1. Socio-Demographic Characteristics for traditional birth attendants (TBAs)

Characteristics	Trained TBAs Total = 44		Untrained TBAs Total = 96		P-Value
	Frequency	Percent	Frequency	Percent	
Age (years)					
20-39	15	34.1	31	32.3	0.976
40 – 49	14	31.8	43	44.8	
50+	15	34.1	22	22.9	
Marital Status					
Married	42	95.5	92	95.8	0.918
Single*	2	4.5	4	4.2	
Ability to read & Write					
Able to Read & write	33	75.0	43	44.8	0.002
Unable to read & write	11	25.0	53	55.2	
Number of children					
<6	16	36.4	45	46.9	0.327
6+	28	63.6	51	53.1	
Duration of stay in the community (Years)					
<6	5	11.4	20	20.0	0.174
6+	39	88.6	76	79.2	

*Single included those who were divorced and widowed.

Utilisation of trained Traditional Birth Attendants

While 61.4% of trained TBAs provided services such as Antenatal care (ANC), conducted deliveries and Postnatal care (PNC), 93.8% of untrained TBAs only conducted deliveries. The distribution of the number of deliveries attended was not significantly different between trained and untrained TBAs, with most TBAs having delivered less than 5 women (81.4%). Post Partum Haemorrhage (PPH) or infections were more common among women who were delivered by trained (40.9%) than untrained (20.8%) TBAs.

Table 2. Utilisation of trained Traditional Birth Attendants (TBAs)

Utilisation factor	Trained TBAs Total = 44		Untrained TBAs Total = 96		P-Value
	Frequency	Percent	Frequency	Percent	
Services offered					
Antenatal care, Deliveries and Postnatal care	27	61.4	6	6.2	<0.001
Deliveries only	17	36.6	90	93.8	
Deliveries Attended (Previous year)					
<5	34	73.3	80	83.3	0.534
5+	10	22.7	16	16.7	
Postnatal related complications					
Post Partum Haemorrhage/ Infection	18	40.9	20	20.8	0.023
No problem	26	59.1	76	79.2	

Characteristics of trained TBAs

Respondents who were able to read and write were 74% more likely to have been trained TBAs. Further more, TBAs who offered ANC, conducted deliveries as well as providing PNC services were 5.15 times more likely to have been trained. Lastly TBAs who attended to mothers who experienced PPH or infections were 94% more likely to have been trained.

Table 3. Characterization of trained traditional birth attendants

Factor	Odds Ratio	95 percent
		Confidence Interval
Ability to read and write		
Able to read and write	1.74	(1.06, 2.85)
Unable to read and write	1	
Services Offered		
Antenatal care, Deliveries and Postnatal care	5.15	(2.94, 9.01)
Deliveries only	1	
Outcome of deliveries		
Post Partum Haemorrhage /Infection	1.94	(1.17, 3.23)
No problem	1	

DISCUSSION

The Traditional Birth Attendants provided ANC, conducted deliveries and PNC services to women in Chongwe rural district. The TBAs tended to be older than 40 years, married with more than 5 children and had stayed in the community for more than 5 years. Post partum haemorrhage or infections were more common among women who were delivered by trained than untrained TBAs.

The study results suggest that to be accepted as a TBA, a woman should have been older, had experience of child bearing and had stayed in community long enough for pregnant women to have had confidence in the TBA to deliver them. Pregnant women in the current study utilised the services of the TBAs partly because there were only 30 midwives spread out in 19 delivery centres to cater for a population of 31,900 women. In other developing countries, women chose the services of TBAs because they were the only option, for reasons ranging from economical, cultural as well as geographical location 110.

The consequences of home deliveries cannot be overemphasised. They range from unhygienic and harmful practices and failure to attend to obstetrical emergencies. Untrained TBAs in the current study had a lower rate of PPH or infection than the trained TBAs had. While TBAs may have been trained in use of gloves to prevent infection, the unavailability of them may have resulted in the repeated use of the same gloves. In another study by Siziya and Hazemba (Unpublished), they found that only 56.7% of trained and 1.3% of untrained TBAs always had gloves on hand. The TBAs may have been protected from getting infection from clients through wearing of reusable gloves, but may have passed infection from one client to another. Furthermore, the reusable gloves may have been stored in unhygienic places and this could have contributed to clients being infected. In spite of the good intention of training the TBAs to assist in deliveries in order to reduce maternal mortality, because of unavailability of medical supplies such as gloves the maternal mortality rate may in fact increase. Other researchers have reported that countries where skilled attendance at delivery is low, they tend to have higher rates of maternal deaths and disability 17. This is the case in Zambia where the maternal mortality was estimated at 729/100,000 live births 8.

There were several limitations of the study. The current results were from one rural district and may not be generalised to the rest of the rural districts in Zambia. Furthermore, our sample being conveniently obtained, the results may not be generalised to the rest of the TBAs in the district because the TBAs who did not participate

in the study may have had different characteristics to the ones that participated in the study. However, with a 76% response rate achieved in this study, significant bias may not have been introduced in our results. Other possible confounding factors were: trained TBAs may have been more aware of definitions of PPH and post partum sepsis, and thus more prone to conduct postnatal visits. Hence, trained TBAs may have been more prone to report these occurrences than the untrained TBAs. Responses to the question on the number of deliveries attended to in the previous year and whether any of the deliveries attended to had complications, and type of complications may have been biased because TBAs do not necessarily keep written records of these events.

In conclusion, TBAs may have been trained in infection prevention through wearing of gloves, but they unknowing may have passed infection to their clients through the reusing of gloves. Therefore, TBAs must be supported by constant supply of medical supplies, emergency backup system and skilled attendants to reduce the risk of complications and death among women.

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Lastly but not the least, we thank the mothers and the Traditional Birth Attendants for their participation in the study.

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