

TRADITIONAL BIRTH ATTENDANT: TRAINING PROFILE, KNOWLEDGE, BELIEF AND PRACTICES IN INTRANATAL PERIOD OF MOTHERS IN TWO URBAN RESETTLEMENT COLONIES OF NORTH- EAST DELHIShalini Smanla¹**HOW TO CITE THIS ARTICLE:**

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ABSTRACT: AIMS: To find out the training profile, knowledge, beliefs and practices of TBAs (Traditional birth attendants) during intranatal period. **SETTING AND DESIGN:** Community based cross-sectional study conducted in Nandnagri & Sundernagri (two resettlement colonies of North-east Delhi) **MATERIALS AND METHODS:** Pregnant women at 28± 2 wks. were contacted individually through the health worker, TBAs/Dais. Each woman enrolled was subjected to a semi- structured pre-tested, pre-coded questionnaire. Relative precision was taken as 10% At 95% confidence level sample size was estimated to be 112. Additional allowance of attrition is taken as 20%. Total Sample Size was calculated to be 270. **STATISTICAL ANALYSIS:** Analysis was done using SPSS version (11.0) and Chi Square was applied to find the association between the variables and p value less than 0.05 was taken as significant. **RESULTS:** Most of the dais were trained in both the areas (80%), although dais in Sundernagri were better with regards to number of trainings received. Clean cord was known to 10% dais in Nandnagri as against 30.4% dais in Sundernagri. Most of the dais in both Nandnagri (50%) as well Sundernagri (45.5%) ensured that the items or Instruments were sterile by boiling or buying new instruments. All the dais in Nandnagri perceived malpresentation & obstructed labor as a danger sign during labor (100%) as against 91% of the dais in Sundernagri. 60% of the dais in Nandnagri could not name the drug or injection that they had used as against 50% in Sundernagri. All the dais in both the study areas could enumerate only one drug and that was inj T.T. which was given soon after completion of third stage. **CONCLUSIONS:** Dais of Sundernagri area where RCH activities were augmented were trained more often and the knowledge and practices regarding antenatal, intranatal and postnatal care was better. Thus, dais need to receive training and refresher courses periodically so that they are motivated and the knowledge is updated. In Sundernagri area meetings were held regularly. Supportive supervision during delivery and periodic contacts with the health staff would improve the knowledge and practices of the dai.

KEYWORDS: Traditional Birth attendant, knowledge, belief, practices.

INTRODUCTION: Although the implementation of TBA training has been given such prominence, there are few published reports evaluating these programs. Many of these evaluations also indicate that TBA training as a sole intervention does not significantly reduce maternal mortality and that improvements are only likely to be observed when TBA training is linked to a strong referral system. Among the national socio demographic goals for 2010 specified by the policy, several goals pertain to safe motherhood, namely that 80 percent of all deliveries should take place in institutions by 2010, 100 percent of deliveries should be attended by trained personnel, and the maternal mortality ratio should be reduced to a level below 100 per 100, 000 live births. About 61 percent of these births take

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place at home and more than one-third of which (37 percent) were assisted by a traditional birth attendant, and 16 percent were assisted by only friends, relatives, or other persons.¹

The majority of deliveries in the under-privileged sections in urban Delhi take place at home and the perinatal mortality remains high². Studies have been conducted on the place of delivery, on the type of assistance and on the profile of the TBAs. However, there is less information on the intranatal practices of the TBAs during home deliveries. The purpose of this study was to observe the delivery practices and to assess the training profile and intranatal practices of these traditional birth attendants among the expectant mothers.

MATERIALS AND METHODS: The study was conducted in two resettlement colonies- Nandnagri and Sundernagri in North- East Delhi and both were within a distance of 1-1.5 km from a Government Medical College &Hospital. In Sundernagri, the RCH package is being strengthened by intensive training and monitoring of TBAs along with the IEC campaign. A list of dais was obtained from the health center and their help was sought to identify the pregnant women. The inclusion criteria was a pregnant woman of 28 +- 2 weeks of gestation, preferably, a permanent resident of the area not requiring institutional delivery. Those who wished to deliver at home were randomly selected from this list and each of them was followed up at 3 occasions till puerperium. An informed and verbal consent was taken from all the respondents and all of them were briefed about the objective of the proposed study prior to their enrolment. Sample size was calculated keeping in mind that a previous study on the outcome of pregnancies in Nandnagri had shown that 62% of the deliveries took place at home and 77% were conducted by the dais that lived and practiced in the same area, usually in the same block. Relative precision was taken as 10% and at 95%confidence level sample size was estimated to be 112. Additional allowance of attrition was taken as 20%.Hence; Total Sample Size was calculated to be a minimum of 270.Analysis was done using SPSS version (11.0) and Chi Square was applied to find the association between the variables and p value less than 0.05 was taken as significant.

RESULTS:

Training Profile of Dais: Most of the dais were trained in both the areas (80%), although dais in Sundernagri were better with regards to number of trainings received. In Nandnagri, most of the dais were trained only once (60%) as against, Sundernagri where, 72.7% of the dais were trained more than once. Regarding duration of training, 62.09% of the dais in Nandnagri had reported being trained for 15 days as compared to 81.8% in Sundernagri. Dais in Nandnagri had a longer experience in the profession, with 70% of the dais having worked for more than 25 years. In Sundernagri only 27.3% of the dais had more than 25 years of experience as most of the dais had been working for 10 to 20 years. Most of the dais (60%) in Sundernagri had been conducting 3-6 deliveries per month as against in Sundernagri where it was observed that about 45.5% of the dais had conducted less than 3 deliveries per month and another 45.5% of the deliver women who had conducted more than 6 deliveries per month. None of the dais had examined the mother in the first trimester of pregnancy. In Sundernagri, the first contact of the most of the dais with the mother was in the third trimester (70%) with rest 30% of the dais establishing contact whenever they were called, (by a family member or an ANM or other health worker).

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Advice given by the Dai to the pregnant mother: All the dais in both the areas has said that they had advised about both diet and immunization. 40% of the dais in Nandnagri as compared to 63.7% in Sundernagri had advised the mothers to get investigated for hemoglobin and Urine examination. About 50% of the dais in Nandnagri believed that malpresentation and multiple pregnancy could be handled at home as against only 9.1% in Sundernagri. When dais were asked to name the circumstances in which the women should be referred, most of the dais in both the study areas had mentioned bleeding per vaginum (70% in Nandnagri and 91.0% in Sundernagri). In Nandnagri, 40% of the dais believed that a woman with abnormal presentation, multiple pregnancy, multipara and loss of fetal movements should be referred. The knowledge of dais in Sundernagri, was found to be better as a much larger proportion of the dais were of the opinion that women with abnormal presentation (81.8%), Multiple pregnancy (63.7%), Multipara (54.5%) & Loss fetal movements (81.8%) should be referred. About, 45.5% of the dais in Sundernagri had reported that they had looked for fetal heart sounds as against only 20% in Nandnagri. Dais of both places could enumerate preterm labor (90%) and loss of fetal movements (60%) as danger signs. Only 30% felt swelling in limbs was a danger sign during pregnancy.

Knowledge about the five cleans: It was better among dais in Sundernagri. Clean cord was known to 10% dais in Nandnagri as against 30.4% dais in Sundernagri. Clean tie was known to 10% of the dais in Nandnagri as against 54.5% of the dais in Sundernagri. Similarly, knowledge of clean surface was better among dais of Sundernagri (91.0%) than those of Nandnagri (60%). Clean cut was not known to any one of dais of Sundernagri whereas, 54.5% of dais in Nandnagri had knowledge about it.

Measures of Asepsis: Most of the dais in both Nandnagri (50%) as well Sundernagri (45.5%) ensured that the items or Instruments were sterile by boiling or buying new instruments. Dai-kit was not used by any dais of Nandnagri whereas 56.5% of the dais in Sundernagri had used it as a means to ensure that items were sterile.

Danger Signs During Labor: All the dais in Nandnagri perceived Malpresentation & obstructed labor as a danger sign during labor (100%) as against 91% of the dais in Sundernagri. About 30% of the dais in Nandnagri had enumerated hand prolapse as a danger sign as against 81.9% dais in Sundernagri. 72.8% of the dais in Sundernagri felt that prolonged labor was a danger sign as against only 20% of the dais in Nandnagri.

Use of drugs and injections: It was more common among dais in Nandnagri (50%) as against the dais in Sundernagri (36.4%). 60% of the dais in Nandnagri could not name the drug or injection that they had used as against 50% in Sundernagri. All the dais in both the study area could enumerate only one drug and that was inj T.T. which was given soon after completion of third stage.

Cord care Practices: All the dais had used sterile blade or scissors to cut the cord in both the study areas. None of the dais mentioned the use of sickle or stone or unsterile instruments. For cutting the cord. When enquired about the different types of applications on the cord stump, 72.7% of the dais in Sundernagri had kept it dry as against 50% of the dais in Nandnagri. However, 50% of the dais in

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Nandnagri had said that antiseptic lotion was applied on the cord stump as against 27.3% in Sundernagri.

Practices in the third stage of labor: Most of the dais in both Nandnagri (50%) and all in Sundernagri (100%) felt that gush of blood was a sign of placental separation. Suprapubic bulge was perceived as a sign of placental separation by 20% of the dais in Nandnagri against 18.2% of the dais in Sundernagri. Placenta was delivered by controlled cord traction by most of the dais in Nandnagri (50%) as well as in Sundernagri (81.8%). About 30% of the dais in Nandnagri as against 45.5% of the dais in Sundernagri had said that they used suprapubic pressure

DISCUSSION: A dai also has a role in preparations before delivery. Most of the dais had informed the women regarding the preparations to be made before delivery in both the study areas (74.0% Nandnagri and 78.7% in Sundernagri). Also about 30% in Nandnagri and 36.4% of the dais Sundernagri had reported that they were available whenever they were called, either by the family member or a neighbor or some health worker.

In a recent study in the same area on, 29 eligible TBAs in the study area were identified and interviewed to assess their knowledge and practices regarding antenatal and perinatal care. Their knowledge about complications in antenatal and perinatal period was inadequate. The majority provided inadequate advice to the mothers³. In both the study areas, most of the dais had given dietary advice. In contrast, most of the Indian studies have shown that the antenatal care by the dai is very less either due to cultural taboo, superstitions or their belonging to lower caste^{4,5}.

A dai is expected to make sure that her kit is always replenished clean and ready for use during a delivery. Use of dai kit was found to be more prevalent in Sundernagri (44.9%) as against 24.8% in Nandnagri. Whereas Sharma et al in a study in urban slums and villages of Delhi have shown that only one of the TBA was found to possess a delivery kit⁶. Similar to these findings a study in a slum area of Baroda city had found that only 6.6% of the pregnant women had mentioned the use of delivery kit by the dai.⁷

Dais have been giving enema to potentiate labor among 30.4% of the mothers in Nandnagri as against 41.7% of those in Sundernagri. The findings by Sharma et al in a study in 1990 conducted in an urban slum area of Delhi have revealed that the dais had given enema either with soap suppository (12%) or soap and water (8%). Routine use of enema according to the WHO classification of practices in Normal birth is among the clearly harmful or ineffective practices and should be eliminated⁸.

The practice of boiling of the items (prior to the delivery) was much higher in Nandnagri (67.5%) than that in Sundernagri (50.4%). This difference can be mostly attributed to the fact that Dai-kit was much more easily available to the pregnant women who had registered at the health center in Sundernagri. Dais in Nandnagri were relying more on boiling of the items rather than using a dai kit. Use of gloves was much more prevalent in Sundernagri (74.0%) as against in Nandnagri (54.5%). This could again, be attributed to the better availability of dai-kit in this study area. The practice of washing hands was observed by more than half of the respondents in both the areas. A good 66% of trained TBAs had washed their hands prior to conducting a delivery as per a study in Rewa district in MP. However mixed responses were available in other studies where the practice of dais washing their hands ranged from 11% to more than 50%⁹.

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Many studies in 1970s and 80s have reported a lack of proper sterilization of instruments among most of the dais^{4,9}. In this study it was found that 49.7% of the dais in Sundernagri and 68.25% in Nandnagri were giving drugs or injections during labor. Absence of drug prescription or drug sample had limited the possibility of knowing the drug used in each of the respondents.

Majority of the dais have reported having tied the cord between the two ties in both the study areas with only 4.1% and 6.3% having left cord untied. In Nandnagri and Sundernagri respectively. However as regards application on the cord stump, Sundernagri had fared better with 60.6% having reported to have applied nothing as reported as opposed to 39.8% in Nandnagri. This is in contrast to the most of the studies that have reported that the dai had resorted to multiple types of application on the cord stump, like ghee, neem paste, haldi etc.^{4,10-13}.

However few of the dais had shown the ampules of injection which was inj Pitocin. Studies have reported that the indigenous practitioners were called frequently to give injections like Inj. Syntocinon 10U I/M for prolonged and obstructed labor and methergin for postpartum haemorrhage¹³. This study has shown that only 0.8% and 3.9% of the dais in Nandnagri and Sundernagri respectively used unsterile instruments. Consistent with this finding, recent studies have shown that most of the dais had used new instruments¹³.

Age composition of dais in Nandnagri was considerably different from those in Sundernagri. Majority of the dais in Nandnagri were more than 60 years old (50%) as against Sundernagri, where majority of the dais were in the age group of 40-49 years (54.5%). Altogether, the mean age of the dais was 54 years. In older studies in 60s and 70s have reported that the TBAs were mostly more than 35 years, illiterate and belonging to the lower socioeconomic status. Recent studies have shown that the dais belonged to older age group of more than 45 years.

Dais in Nandnagri had a longer experience in the profession. 70% of them had worked for more than 25 years as compared to 27.3% in Sundernagri. Altogether, in this study, 47% of the dais had worked for more than 25 years and the mean duration of experience was 18.05 years + 6.67 years. This was comparable with the other studies according to which the working experience of the dais had ranged from 12 to 20 years. Most of the dais in both the study areas had conducted less than 6 deliveries per month (80% in Nandnagri as against 54.6% in Sundernagri). Altogether mean deliveries conducted per month was 5.19 + 4.26 per month.

CONCLUSIONS: In both the areas, the dais had established contact with the mothers in the antenatal period, which is better than that observed in most of the other Indian studies. In the intranatal period, majority of the dais had practiced the five cleans; however, the practice was better in Sundernagri. In Nandnagri, fewer dais had made use of Dai kit (due to its non-availability) and the emphasis was more on boiling of the items. The Dai is an important link between the mother and the health services as she is in contact with the mother during pregnancy, labor and puerperium. This should be recognized and a coordinated and an integrated approach involving the health worker female and the anganwadi worker should be established. Certain components in the Dai training programme need to be strengthened like early recognition of complications during pregnancy labor and puerperium along with timely and appropriate referral. Skill based training should be intensified as it was observed that many of them were aware but still practiced poorly.

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	Nandnagri	Sundernagri	P Value
	N = 10	N = 11	
Age Composition			
40-49	3(30)	6(54.5)	>0.05
50-59	2(20)	3(27.3)	
>60	5(50)	2(18.2)	
Educational Status			
Illiterate	7(70)	8(72.7)	>0.05
Primary	2(20)	2(18.2)	
Secondary	1(10)	1(9.1)	
Income (in Rs)			
1000-1500	3(30)	6(54.5)	>0.05
1501-2000	3(30)	2(18.2)	
2001-2500	4(40)	1(9.1)	
>2500	0(0)	2(18.2)	
Religion			
Hindu	8(80)	6(54.5)	>0.05
Muslim	2(20)	5(45.5)	

TABLE No. 1: Socio- demographic profile of the dais

* One category may overlap with other categories since one can mention more than one category.

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	Nandnagri N = 10	Sundernagri N = 11	P Value
Training Status			
Untrained	8(80)	11(100)	>0.05
Trained	2(20)	0(0.0)	
If Trained, number of times trained			
Once	6(60)	3(27.3)	>0.05
More than once	2(20)	8(72.7)	
Duration of training (in days)			
15 days	5(62.09)	9(81.2)	>0.05
30 days	2(25.0)	2(18.2)	
45 days	1(12.0)	0(0.0)	
Period since working			
<10 years	1(10.0)	2(18.2)	>0.05
10-20	2(20.0)	4(36.4)	
21-25 years	0(0.0)	2(18.2)	
>25 years	7(70.0)	3(27.3)	
Number of deliveries conducted per month			
<3	2(20)	5(45.5)	>0.05
3-6	6(60)	1(9.1)	
>6	2(20)	5(45.5)	

TABLE No. 2: Training profile of the dais

* One category may overlap with other categories since one can mention more than one category.

	NANDNAGRI n=123	SUNDERNAGRI n=127	P Value
Boiling of the items			
Yes	83(67.5)	64(50.4)	<0.05
No	17(13.8)	50(39.4)	
Don't know	5(4.1)	0(0.0)	
NA	18(14.7)	13(10.2)	
Whether clean surface was practiced			
Yes	72(58.5)	81(63.8)	>0.05
No	33(24.8)	34(26.8)	
NA	18(14.7)	12(9.4)	
Use of gloves			
Yes	67(54.5)	94(74.0)	<0.05
No	56(45.7)	33(26.0)	
Washing of hands with soap/scrubbing brush			
Yes	73(59.3)	64(52.8)	

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No	42(34.2)	60(47.2)	>0.05
Don't know	8(6.5)	0(0.0)	
Wiping hands after washing			
Yes	82(66.7)	106(83.5)	<0.05
No	24(19.6)	11(8.7)	
Don't know	17(13.8)	10(7.9)	
Table No. 3: Practice of Asepsis by Traditional birth attendant (TBA) at the time of delivery			

Instruments used to cut the cord			
Sterile blade	79(64.2)	87(68.5)	>0.05
Unsterile blade	5(3.9)	1(0.8)	
Sickle	2(1.6)	0(0.0)	
Scissors	27(22.0)	31(24.4)	
Don't know	14(11.4)	4(3.1)	
Anything was applied to the cord stump			
No	49 (32.0)	77 (60.6)	<0.05
Yes	101(67.0)	50 (39.4)	
If Yes, different kinds of applications			
Ghee	79(70.2)	22(44.0)	<0.05
Neem paste	2(2.7)	1(2.0)	
Antiseptic lotion	20(27.0)	27(54.0)	
Table No. 4: CORD CARE PRACTICES BY THE DAI			

	NANDNAGRI n=123	SUNDERNAGRI n=127	P Value
Advice in labor pains			
Breathe deeply	79(64.2)	76(61.3)	<0.05
Don't bear down	20(16.3)	10(8.1)	
Both of these	0(0.0)	8(6.5)	
None of these	6(4.9)	6(4.8)	
NA	18(14.7)	12(9.4)	
Advice to bear down during the pains			
Yes	98(79.7)	108(85.0)	>0.05
No	7(5.5)	7(5.5)	
Don't know	0(0.0)	0(0.0)	
NA	18(14.7)	12(9.4)	
Use of fundal pressure			
Yes	76(61.7)	48(37.8)	<0.05
No	22(17.9)	67(52.8)	
Don't know	7(5.7)	0(0.0)	

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NA	18(14.7)	12(9.4)	
Use of drugs or injections			
Yes	84(68.25)	63(49.7)	<0.05
No	21(17.1)	52(40.9)	
NA	18(14.7)	12(9.4)	
Perineal support			
Yes	76(61.78)	75(59.1)	>0.05
No	10(8.1)	23(18.1)	
Don't know	19(15.4)	17(13.4)	
NA	18(14.7)	12(9.4)	
Use of enema			
Yes	38(30.4)	53(41.7)	<0.05
No	64(52.0)	72(56.7)	
Don't know	3(2.4)	1(0.8)	
NA	18(14.7)	1(0.8)	

Table No. 5: Intranatal practices employed by the traditional birth attendant to augment labor

	NANDNAGRI n =123	SUNDERNAGRI n =127	P Value
Whether the baby cried immediately			
Yes	98(79.5)	106(83.5)	>0.05
No	1(0.8)	9(7.2)	
Don't know	6(4.9)	0(0.0)	
NA	18(14.7)	12(9.4)	
PV examination after the delivery of the placenta			
Yes	57(46.3)	82(64.6)	>0.05
No	45(36.6)	38(29.9)	
Don't know	21(17.1)	7(5.5)	
Mother sponged after delivery			
Yes	77(63.1)	94(74.0)	<0.05
No	16(13.1)	31(24.4)	
Don't know	29(23.8)	2(1.6)	
Use of clean cloth pad			
Yes	75(61.5)	100(79.4)	>0.05
No	48(38.6)	27(20.7)	

Table No. 6: Observations made by the attendant in the third stage of labor

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