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A study of some aspects of Antenatal Care following Lot Quality Techniques in the villages of Amdanga Block, West Bengal

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Abstract: *A Cross sectional observational study was performed for two months from December 2013 to January 2014 in 81 villages in Amdanga Block, North 24 Parganas by Lot Quality Sampling Technique to estimate some aspects of Antenatal Care. The poorly performing lots were identified and the coverage of various services were ascertained and also the different motivators of the mothers were identified by this study. A total of 567 samples were collected by appropriate techniques. Only two of them did not take antenatal visit. 83.9% were motivated by early ANC, mostly by the ASHAs and mother-in-laws. Most of them went to sub centres, and were registered by ANMs. Also most of them (83.9%) registered early for ANC. The coverage of various services among the mother was satisfactory, and was found to have improved than NFHS-3, though the number of poorly performing lots as per set criteria was found to be as high as 25%.*

Keywords: *Lot Quality sampling, Antenatal care*

I. Introduction

Antenatal care (ANC) helps in getting a healthy mother and a healthy baby at the end of pregnancy. This requires early registration of mother and a host of services as ANC package like IFA tablets, Tetanus toxoid, advices (regarding diet, rest) etc. It is a very important service offered to mothers in their Antenatal period of all the sections of society, especially to the vulnerable sections, for perpetuation of mankind. This requires close monitoring from time to time. A cross-sectional study using lot quality technique was undertaken among a sample of 198 women in 18 sub-centers (lots) of Bankura-I Community Development Block who had delivered in last 12 months preceding the survey to find out the sub-center(s) with 'acceptable' coverage (> or = 50%) and overall coverage of 'appropriate' antenatal care of the block. Out of 18 sub-centers, only one had 'acceptable' coverage of appropriate antenatal care [1]. Also NFHS-3 did an in depth review of antenatal services. It showed 56.5% of ANC registrations of West Bengal by doctors followed by ANMs (29.5%)[2]. However, NFHS-4 data are yet to arrive and the impact of NRHM on the ANC is yet to be ascertained properly. Though many studies are available regarding the factors influencing antenatal outcomes in India like distance, age, education, parity of mother, [3, 4], the motivating persons are not mentioned explicitly in any of them.

With this background, this study was carried out using the Lot Quality Technique [5], with the objectives of assessing the different aspects of antenatal care and finding out the number of poorly performing lots along with the types of motivators.

II. Materials and Methods

The study was conducted for two months from December 2013 to January 2014 in 81 villages in Amdanga Block, North 24 Parganas, West Bengal, the field practice area of R G Kar Medical College. It was an observational, cross sectional studyapplying the Lot Quality Technique (described by WHO). The total number of Antenatal mothers in the block was 3531. With desired level of accuracy ±5% and desired confidence 99%, sample size was calculated to be 663 mothers. Thus sampling fraction was calculated to be 663/3531X100=19%. As it was greater than 10%, the final estimate of sample size was approximately found to 567 mothers. Thus from each village, 7 mothers were surveyed for their AnteNatal care. The data were collected in a predesigned pretested, semistructured schedule. The study was passed by the Institution Ethics committee and work commenced after taking proper permission from District authorities. On reaching each village, the centre of the village was sought, and then sampling started from there. Data were entered, compiled, cleaned and analysed using Epi Info 7. Registration before 12 weeks, three antenatal check-ups with checking of BP, weight, edema and abdominal examination, distribution of 100 IFA tablets and appropriate tetanus prophylaxis were taken collectively as criteria of'appropriate' antenatal care.

III. Results

The results are given in the tables below. The number of poorly performing lots as per criteria set was found to be as high as 20 of 81 (24.7%). Only 2 of 567 mothers did not register for Antenatal care.

Mothers of age 16-20 years were highest (40.7%) in number, and mothers of age group 36-40 formed the second highest (38.3%) group. Most of the respondents were Muslims (62.1%), general castes (80.6%), and had joint family (80.2%). The per capita income was Rs 1010, and it varied highly (SD=Rs 788), with total number of living issues roughly equal to two/mother.

83.9% of them were motivated for early ANC. The ASHA motivated 38.9% of them followed by their mother in laws 27.5%. 97.3% of those who were motivated attended and registered early for ANC. About 80.3% of them were registered by ANMs. 74.8% were registered in the sub centres, and 15.9% in Private clinics by doctors. The mean month of registration of pregnancy was 3, and on an average they received 6 ANCs.About the package of services for those who were registered, all of them had their BP checked atleast once, weight taken atleast once and given some form of iron. Other services like TT immunisation, abdomen examination, advice regarding rest and diet were also offered to most of the mothers. They reported of having received on an average 90 IFA (SD 38) tablets and consumed 75 (SD 43) of them. Most of them were correctly able to recall about 3 danger signs of pregnancy.

IV. Discussions

The study done by S. Pal et al. has showed thatthe overall coverage of 'appropriate' antenatal care was 29.1% in the study Block[1]. NFHS 3 [2]showed that in West Bengal 91.9%had atleast one ANC visit , 62.0% had three or more Antenatal Visits, 38.6% had early registration for pregnancy, 40.8% can recall the complications of pregnancy, 90.9% had appropriate TT immunisation, 81.9% were given or bought IFA tablets, percentage of pregnant women who took IFA for more than 90 days were 25.7. As evident from the study all of the parameters had improved in this block of West Bengal than those found in the the last NFHS-3. Also, the persons who have mostly motivated the mothers, as per this study, are the ASHAs and mother-in-laws.

However due to time constraint, only a block could be covered. Also the Lot Quality Technique does not allow for external validity. But if this study can be replicated in a larger population, a real impact of NRHM on rural West Bengal can be established with regards to ANC.

Conflict of Interest:

None declared

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Table 1: The socio demographic characteristics of the study population (n=567)

Parameter	Frequency	Percentage
Age		
16-20	231	40.7
21-25	101	17.8
26-30	15	2.6
31-35	3	0.5
36-40	217	38.3
Religion		
Hindu	215	37.9
Muslim	352	62.1
Caste		
General	457	80.6
SC/ST	109	19.2
OBC	1	0.2
Type of Family		
Nuclear	220	38.8
Joint	347	61.2
Total	567	100

Table 2: The early Antenatal registration related factors

Parameter	Frequency	Percentage
Whether motivated for early ANC(n=567)		
Yes	476	83.9
No	91	16.1
Motivator (n=476)		
Self	8	1.7
Husband	90	18.9
Mother in law	131	27.52
ASHA	185	38.86
Others	62	13.02
Whether attended Health facility after advice (n=476)		
Yes	463	97.3
No	13	2.7
Designation of 1st person giving care		
ANM	382	80.3
Government Doctor	18	3.8
Private Doctor	76	15.96
Place where registered for ANC (n=476)		
Private clinic	76	15.9
Sub centre	356	74.8
PHC/BPHC	30	6.3
Higher Centres	14	2.9

Table 3: The table shows the ANC services received by the mothers (n=565)

Parameter	Frequency	Percentage
BP measured atleast once	565	100
Weight taken atleast once	565	100
Urine examined atleast once	558	98.8
Blood examined atleast once	546	96.6
Abdomen examined atleast once	548	96.9
EDD told to mother	524	92.7
Two doses of TT given	563	99.6
Some form of Iron supplementation done	565	100
Advice about extra rest	554	98.1
Advice about extra food	554	98.1

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