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Utilization of Maternal and Child Health Care Services among Pregnant Women in Slum Population of West Delhi

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Abstract

Utilization of maternal and child health (MCH) services remains poor in India. This study aimed to assess the utilization of MCH care services among pregnant women residing in an urban slum area of West Delhi. A household survey was conducted using questionnaire cum interview method for collection of sociodemographic information, obstetric history, and information on utilization of MCH care services. Pregnant women were followed within 72 h of delivery for obtaining information regarding delivery conditions. Although 96.6% of pregnant women have attended at least one antenatal care (ANC), whereas complete four ANC were attended by only one-fourth (25.3%) pregnant women. Nearly three-fourth (73.3%) pregnant women received; ANC from a government doctor and coverage for ANC components was highest in ANC provided by government doctor. Utilization of full ANC was reported by less than one-fifth pregnant women (19.18%). Only one-fifth of pregnant women (19.7%) received supplementary nutrition. Postnatal care (PNC) was received by 73.2% of women who had institutional deliveries during their stay in health facility only. Coverage of ANC components, number of ANC visits, utilization of full ANC, and PNC was found unsatisfactory. Participation in supplementary nutrition program was also poor. Intervention programs are needed for enhancing community awareness and improving the competence, confidence, and motivation of grass root health workers.

Keywords: Ante natal care, IFA tablets, Post natal care, Pregnancy, Supplementary nutrition

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Introduction

Since first 5-year plan, maternal and child health (MCH) remained an integral part of the family welfare program in India. Different health programs have been initiated by Government of India (GOI) to improve MCH and, thereby, restrict the number of maternal and newborn deaths in the country. The WHO has defined antenatal care (ANC) as the care provided by some skilled health-care professionals to pregnant women and adolescent girls to ensure the best health conditions for both mother and baby during pregnancy. ANC components include risk identification; prevention and management of pregnancy-related or concurrent diseases; and health education and health promotion.[1] MCH programs in India aim at providing at least four antenatal check-ups to all pregnant women which should include measurement of weight and blood pressure, abdominal examination, immunization against tetanus, iron and folic acid supplementation, their expected delivery date to be told and should be counseled about institutional delivery and diet during pregnancy, etc.[2] National Health Mission ensured universal coverage of the presence of skilled person in all births (both at institutional and community level) and to provide access to emergency obstetric and neonatal care services.[3] Every pregnant women should get at least four post-natal check-up (first visit within 24 h of delivery, second on 3rd day, third on 7th day, and fourth after 6 weeks of delivery). During postnatal check-up, women should be advised on colostrum feeding, exclusive breastfeeding, family planning, and immunization of the child.[2]

Supplementary nutrition under ICDS is to bridge the gap between the Recommended Dietary Allowance and the Average Daily Intake of children, pregnant, and lactating women.[4] Under the revised nutritional and feeding norms, all pregnant and lactating women should get hot cooked meal or take home rations comprising the nutritional value of 600 Kcal and 18–20 g of protein for 300 days/year.[5]

Despite all efforts made, MCH remain poor in India. Health of urban poor is considerably worse off than the urban middle and high income groups and is may be even worse than the rural population.[6] ANC services though available in enough amount their adequate utilization among slum population are of question.[7] Effective ANC can improve the health of the mother as well as give her a chance to deliver a healthy baby. Regular monitoring during pregnancy can help detect complications at an early stage before they become life-threatening emergencies.[1] Hence, this study was conducted to assess the utilization of MCH care services among pregnant women residing in an urban slum area of West Delhi.

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Materials and Methods

This was a community-based longitudinal study, carried out from October 2014 to October 2017 in Kirti Nagar slum of west Delhi. Ethical clearance has been obtained from the Institutional Ethics Committee of Lady Irwin College, New Delhi. A total of 178 pregnant women were recruited under the study through door to door survey using inclusion and exclusion criteria. The study participants were informed about the aims of the study and a written consent was obtained from all pregnant women. Pretested questionnaire cum interview schedules were used for collection of

sociodemographic information, obstetric history, and information on utilization of MCH care services. All these information were collected during third trimester of pregnancy by household survey. After delivery, pregnant women were followed within 72 h of delivery for obtaining information regarding delivery conditions as well as postnatal care. Off springs of study subjects were followed throughout infancy and information regarding utilization of supplementary nutrition program of ICDS was collected up to 1 year of age. Data entry was done in the Microsoft Access and data analysis was done using Microsoft Excel and SPSS.

Results

Sociodemographic data reported that most of the pregnant women (89.3%) were Hindus followed by 10.1% Muslims and 0.6% Christians. Majority of study participants (44.9%) belonged to schedule cast followed by other backward caste (33.1%), general caste (18.5%), and schedule tribes (1.7%), whereas 1.7% do not know their caste. Nearly two-third of the pregnant women (67.4%) had nuclear families, whereas rest one-third (32.6%) had joint families. The majority of families belonged to economically weaker section (annual income <1 Lakh Rupees), 33.1% belonged to low-income group (annual income 1 lakh to 2 lakh rupees), and only 5.6% families had annual income more than 2 lakh rupees. Information on educational status revealed that one-third pregnant women (33.1%) were illiterate and 2.8% can read or write but did not attained any formal education. Primary level education was attained by 15.2% pregnant women, 18.5% had education up to 5th to 8th standard, 11.2% up to 10th standard, and 12.9% had secondary level education. Only 6.2% of study subjects were graduates.

ANC utilization data reported that at least one ANC was attended by 96.6% of pregnant women, whereas complete four ANC were attended by only one-fourth (25.3%) pregnant women [Table 1]. Three-fourth (73.3%) pregnant women received ANC from a government doctor, 15.1% from ANM, and 11.6% from a private doctor.

All ANC components were not covered during check-up as 18.19% of pregnant women were not weighed, 19.77% did not have blood pressure measurement, and 19.77% did not have abdomen check-up. Urine and blood samples were not checked for 28.5% and 26.2% pregnant women respectively. IFA tablets are received by 94% of pregnant women who had ANC; however, nearly one-fourth (23.0%) received only 30 or less tablets, majority (32.0%) received 31–60 tablets, 15% received more than 60 to 90 tablets, and only one-fifth (20.8%) received more than ninety IFA tablets. Data on consumption of IFA tablets showed more worse picture as 8% of pregnant women did not consume even one IFA tablet and 42% consumed only 30 or less tablets. Consumption of 90 or more tablets was reported by only less than 10% (9.9%) pregnant women. Reasons responsible for not consuming IFA tablets were side effects such as nausea and discomfort after consumption and did not feel the need. A total of 98% of pregnant women got immunization against tetanus toxoid (TT) during current pregnancy. Pregnant women, who attended ANC, only 48.43% were counseled for institutional delivery, 42.4% were advised about diet during pregnancy, and only 41.86% were told their expected delivery date. Coverage of ANC components was highest in ANC provided by government doctor; however, counseling on different aspects such as institutional delivery and diet during pregnancy was low. Quality of ANC provided by ANM was poor which comprised only IFA supplementation and TT vaccination [Table 2]. Although the number of pregnant women received any ANC was quite good (96.6%); however, only less than one-fifth pregnant women (19.18%) reported utilization of full ANC (at least four antenatal visits, one dose of TT, and IFA tablets or syrup taken for 90 or more days).

Data on utilization of ICDS supplementary nutrition program indicated poor participation of pregnant and lactating women in only one-fifth of pregnant women (19.7%) received supplementary nutrition service from an AWC during present pregnancy. Reason responsible for poor participation during

Table 1: Utilization of antenatal care services among pregnant women

Services	*n*	*%*
Attend any ANC (*n*=178)		
Yes	172	96.6
No	6	3.4
ANC provider (*n*=172)		
Government Doctor	126	73.3
Private doctor	20	11.6
ANM	26	15.1
Number of ANC received		
1	172	96.6
2	152	85.4
3	95	53.4
4	45	25.3
Attend ANC during first trimester (*n*=172)	68	39.5
Pregnant women who had full ANC (*n*=172)	33	19.18

ANC: Antenatal care

Table 2: Components of ANC

ANC components	*Government doctor (n=126)*		*Private doctor (n=20)*		*ANM (n=26)*		*Total (n=172)*	
	N	*%*	*n*	*%*	*n*	*%*	*n*	*%*
Body check-ups								
Weight measurement	121	96.0	17	85.0	1	3.8	139	80.8
Height measurement	11	8.7	6	30.0	0	0.0	17	9.9
Blood pressure measurements	120	95.2	17	85.0	0	0.0	137	79.7
Urine examination	109	86.5	14	70.0	0	0.0	123	71.5
Blood examination	112	88.9	15	75.0	0	0.0	127	73.8
Abdominal palpation	123	97.6	14	70.0	0	3.8	138	80.2
Received IFA tablets								
Yes	125	99.2	16	80.0	21	80.8	162	94.2
TT Vaccination								
Once	10	7.9	3	15.0	5	19.2	18	10.5
Twice	111	88.1	16	80.0	18	69.2	145	84.3
Booster	2	1.6	1	5.0	3	11.5	6	3.5
Advice/Counseling								
Told the expected delivery date	60	47.6	12	60.0	0	0.0	72	41.9
Advised for institutional delivery	71	56.3	12	60.0	1	3.8	84	48.8
Advised to take proper nutrition	59	46.8	13	65.0	1	3.8	73	42.4

ANC: Antenatal Care, TT: Tetanus Toxoid

pregnancy was lack of knowledge (28.0%), do not like the quality (23.8%), do not feel the need (19.6%), inaccessibility to anganwadi center (14.0%), and nobody approached (14.7%). During lactation only 6.9% of subjects participated in the program at 2 weeks of age which increases slightly with age of infants and observed among 17.9%, 19.6%, 26.1%, and 29.8% at 3, 6, 9, and 12 months of age, respectively. Reasons reported for poor participation during lactation include lack of knowledge, not convenient to go to the center with a young child, and poor quality of food.

A total of 138 women were followed after delivery for obtaining the information regarding delivery care and practices. The proportion of deliveries conducted by caesarean section was 13.8% deliveries [Table 3]. More than one-fourth (26.8%) of deliveries take place at home either in Delhi (23.9%) or at the native village (2.9%) of the respondent. Three-fourth of deliveries (73.2%) were institutional deliveries comprising 67.4% at government hospital and 6.4% at private hospital. In case of delivery at home, 89% of births were attended by untrained Dai, relatives or neighbors and only 10% deliveries were attended by some skilled health personnel, that is, trained Dai. Disposable delivery kit was not used even in single delivery. Most of the subjects (94.6%) informed that a new blade was used for cutting the umbilical cord and 70.3% subjects informed that the blade was cleaned before cutting the cord.

More than one-fourth of pregnant women (26.8%) did not get any postnatal care (PNC). Women who had institutional delivery got PNC in hospitals only and 91.1% were in government institutions. Most of the subjects (96.0%), who received PNC were examined within 24 h of delivery and 57.4% were examined twice or more during their stay in hospital. Postpartum visits by trained health personnel (ANM/ASHA) at home as per the recommendations of MOHFW were not made. Among those who received PNC, 94.1% subjects were advised on breastfeeding, 92.1% about keeping the baby warm and need of cleanliness; and nearly two-third (68.3%) were advised about family planning [Table 4].

Table 3: Information regarding delivery conditions

Variables	*n*	*%*
Place of delivery (*n*=138)		
Government hospital	93	67.4
Private hospital	8	5.8
Home (at Delhi/native place)	37	26.8
Type of delivery (*n*=138)		
Normal delivery	119	86.2
Cesarean section	19	13.8
Presence of skilled health personnel in deliveries at home (*n*=37)		
Trained Dai	4	10.8
Untrained Dai/neighbors/relatives	33	89.2

Table 4: Information of postnatal care

Variables	*n*	*%*
Postnatal check-up (*n*=138)		
Yes	101	73.2
No	37	26.8
Who carried out postnatal check-up (*n*=101)		
Government Doctor	92	91.1
ANM	1	1.0
Private doctor	8	7.9
Advice during postnatal check-up (*n*=101)		
Breastfeeding	95	94.1
Keeping the baby warm	93	92.1
Need for cleanliness	93	92.1
Family planning	69	68.3

Discussion

Findings highlighted that although most of pregnant women (96.6%) surveyed avail any kind of ANC; however, full ANC was availed by only less than one-fifth pregnant women (19.2%). Nearly three-forth (73.3%) pregnant women received ANC from government doctor. Ghosh-Jerath *et al*.[8] also reported that though 79.36% pregnant or recently delivered women in urban slums of Delhi avail some kind of ANC; however, complete ANC package especially the counseling component was inadequate. Among women who received ANC, 72.2% availed ANC at public facility, 21.6% at private facility, and 6.2% at some non-government organization. Singh *et al*.[9] reported that only 24.7% of the total pregnant females (*n* = 566) registered under the study received full ANC services in a rural area of Bareilly. Number of ANC attended reported by present study is quite lower as compared to NFHS-4[10] and NFHS-5[11] data of New Delhi, where 67.9% and 77.2% women, respectively, had at least four ANC visits during pregnancy. Coverage for TT immunization is higher than NFHS-4[10] (90.6%) and NFHS-5[11] (93.4%) data. Information on delivery conditions reported that more than one-fourth deliveries (26.8%) took place at home and of these only 10.8% were attended by some skilled health personnel. These findings showed poor trend as compared to NFHS 4[10] and NFHS-5[11] data of Delhi reported that the percentage of institutional birth was 84.4% and 91.8%, respectively. The present study reported a higher proportion (92%) of institutional deliveries took place in public health facility as compared to NFHS-4[10] and NFHS-5[11] data reported that 55.5% and 62.4% institutional deliveries, respectively, took place at public health facility. NFHS-4[10] and NFHS-5[11] data reported that only 3.6% and 2.3% home deliveries in Delhi, respectively, were conducted by skilled health personnel. Data on full ANC reported by present study (19.2%) are similar to NFHS-4,[10] data of India (21.0%), however, are quite lower than Delhi (39.0%). Kushwaha *et al*.[12] reported full utilization of ANC services as 59% among peri-urban population of Aligarh and nearly one-fourth deliveries (23%) take place at home conducted by untrained persons.

The present survey reported that only 37.3% pregnant women attended their first ANC visit during first trimester which is lower than NFHS-4[10] (63.0%) and NFHS-5[11] (76.4%) data of Delhi. Ghosh-Jerath *et al*.[8] also reported that 43.8% pregnant or recently delivered women in urban slums of Delhi registered for ANC during first trimester. The proportion of normal delivery was found higher (86.2%) in the present survey as compared to the data of Delhi reported by NFHS-4(73.3%) and NFHS-5[11] (76.4%). The present study reported highest coverage of ANC components by government doctor which are in line with other studies. Agarwal *et al*.[13] reported that ANC provided by doctors comprised significantly higher proportion of blood pressure measured and advice given to pregnant women as compared to ANC provided by health workers.

Results of present study reported that only less than one-fifth (19.7%) pregnant women received supplementary food from anganwadi center. These findings are in line with NFHS 3.[14] findings reported that nationwide only 21% of pregnant and 17% of breastfeeding women received supplementary food. In the present study, PNC was received by only 73.2% of women who had institutional deliveries. PNC was given during their stay in health facility only and no postpartum visits were made by health workers at home.

Similar results have also been reported by other studies. A hospital-based study of Delhi reported unacceptably low

utilization of PNC, where only 9.3% of women obtained PNC in postnatal clinic after discharge from same institute.[15] Secondary analysis of District Level Household Survey (2007–08) reported inadequate coverage of PNC, especially for mothers from economically disadvantaged households. Only 44% of mothers in India received any care within 48 h after birth. The use of PNC among rich population was found 3 times more as compared to poor population.[16]

Conclusion

The present study highlighted that although good proportion of pregnant women registered for ANC; however, services received during ANC and number of ANC attended were not sufficient. Coverage of PNC as well as utilization of supplementary food was also not up to the mark. Utilization of services is lower among slum women as compared to the data of Delhi provided by NFHS. There is a need for enhancing community awareness about the importance of ANC, adequate nutrition during pregnancy, institutional birth, and postnatal care. Intervention programs are needed for improving the competence, confidence, and motivation of grass root health workers to ensure full range of antenatal and postnatal care for all pregnant women.

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