Original Research Article

Utilization of intranatal care services in urban slums of Nanded city

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Abstract

Background: Childbirth is a universally celebrated event. Complications during pregnancy, delivery and during postnatal period are well documented and many of them can be prevented and managed effectively. Urban slums lack basic health infrastructure and outreach services. In such conditions, ill health and premature deaths are rule rather than exception and the most severely affected are the women of childbearing age and children. **Aims and Objective:** To assess the utilization pattern of intranatal care and to identify the factors affecting it among married women of reproductive age in urban slum areas of Nanded city **Methods:** A community based cross sectional descriptive study was carried out from July 2009 to November 2011 in urban slums of Nanded city with sample of 400 women's selected using Probability Proportionate Sampling. Analysis was done using appropriate statistical measures like proportions; chi square test was used to assess the difference between various proportions. **Results:** 6.75%women delivered in home, 93.25%delivered in institution. 6% deliveries were conducted by untrained birth attendants. Women's age and education, husbands education and birth order was found to be significantly associated ($p<0.05$) with intranatal care service utilization **Conclusions:** Sociodemographic variables of reproductive age group women have impact on utilization of intranatal care services. Social and cultural accessibility is an important as physical accessibility. The risk factors identified for home deliveries are low educational status of respondents and their husbands and high parity. Respondents with these characteristics should be identified and motivated for institutional delivery.

Key Word: Intranatal care, Institutional delivery, Slum

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Received Date: 08/02/2019 Revised Date: 13/03/2019 Accepted Date: 04/04/2019
DOI: https://doi.org/10.26611/10111011

Access this article online	
Quick Response Code:	Website: www.medpulse.in
	Accessed Date: 07 April 2019

INTRODUCTION

Childbirth is a universally celebrated event. Childbirth is essentially a healthy and welcome process but is also a moment of great risks. Complications during pregnancy, delivery and during postnatal period are well documented and many of them can be prevented and managed effectively. Pregnancy and childbirth are in fact leading cause of death and disability for women of 15 to 49 years of age group in developing countries. The healthy future of society depends on the health of the children of today and their mothers, who are guardians of that future[1]. Women need to access basic set of health care interventions before, during and after childbirth in order to have best chances of survival. A total of 11–17% of maternal deaths occurs during childbirth itself; 50–71% occurs in the post-partum period[2]. In India both child mortality (especially neonatal) and maternal mortality are high. India accounts for more than 1/5th of all maternal deaths from causes related to pregnancy and childbirth[3]. Maternal mortality and morbidity continue to be high despite existence of national programmes for improving maternal and child health in India. This could be related to non-utilization or under utilization of maternal health care services amongst rural poor and urban slum population due to either lack of awareness or access to health care services[4]. Urban growth has been exponential

How to cite this article: Sunita P Pawar, Geeta Pardeshi. Utilization of intranatal care services in urban slums of Nanded city. *MedPulse International Journal of Community Medicine.* April 2019; 10(1): 01-06. https://www.medpulse.in/

in India over the last few decades. It is estimated that of the nearly 30% of India's population or about 300 million people live in towns and cities[5]. Urban slums lack basic health infrastructure and outreach services. In such conditions, ill health and premature deaths are rule rather than exception and the most severely affected are the women of childbearing age and children[6]. NFHS 3 (National Family Health Survey-2005-2006) has shown that two out of three births in Maharashtra takes place in health facility and one out of three births takes place in home. This survey shows that 83.3% of women in urban areas and 48.9% of women in rural areas have delivered in institutions. In slum areas of Mumbai and Nagpur, 83.3% and 77.7% of deliveries have been reported to be institutional respectively[7]. Urban slum population constitutes a marginalized section of the society. Health status and access of reproductive and child health services of slum dwellers is poor. The information on existing pattern of intra natal care service utilization in urban slums is essential for planning need based health care delivery services to urban slums. The present study is attempted in that direction.

AIM AND OBJECTIVES

To assess the utilization pattern of intra natal care services To identify the factors affecting it among married women of reproductive age in urban slum areas of Nanded city

METHODS

It was a community based cross-sectional descriptive study conducted from July 2009 to November 2011 in urban slums of Nanded city. There were 58 slums in Nanded city with total population of 1, 54, 020 as per records obtained from City Municipal Corporation office[8]. Study area situated in the perimeter of 8-10 km away from Government Medical College Nanded. According to National Family Health Survey-3 (2005-2006) prevalence of home deliveries in a slum of Maharashtra was 23%[9], study was done with sample size of 400 with 20% allowable error, 95% confidence level, 25% additional sample size to reduce error due to noncompliance. Probability Proportionate Sampling (PPS) was used for deriving appropriate sample from slums[10].

Sampling procedure: The steps for selection of the Primary Sampling Units were as follows All 58 slums of the city were arranged as per the list obtained from city Municipal Corporation from 1 to 58 with their respective population Total cumulative population was calculated by adding the population of current slum with population of all previous slums There were a total of 58 slums in the city out of which it was decided to include 20 slums in the sample.

Sample interval was calculated as:

Sample interval = Total cumulative Population / 20

= 154,020 /20

= 7701

Random number smaller than the sample interval was selected by using Random Number Table. The random number selected was 1080

For selecting first Primary Sampling Unit (PSU): As random number 1080 was smaller than total population of 1st slum i.e. 3687, thus 1st PSU was the 1st slum

For selecting second PSU: The sample interval was added to random number 1080, 1080 + 7701 = 8781, Number 8781 was greater than total cumulative population of slum 2 (4774) and 3 (6682) thus we had skipped slum Number 2 and 3 and as the number was less than total cumulative population of slum Number 4 (8994) thus 2nd PSU was slum Number 4

For selecting third PSU, sample interval was added to 8781: 8781+7701= 16482, Number 16482 was less than cumulative population of slum Number 9 (17101), thus 3rd PSU was slum Number 9 Likewise the 20 PSUs selected from 58 slums were as follows. **1, 4, 9, 17, 23, 26, 31, 32, 33, 36, 40, 43, 46, 48, 49, 51, 53, 55, 57, 58** 20 respondents were selected from each of 20 PSUs to meet sample size of 400. While selecting house holds the selected PSUs were surveyed to identify any temple, hospital, mosque or restaurant situated approximately at the centre of the slum and a bottle was rotated there. Survey was started from the lane towards which mouth of the bottle was directed. Each house along the lane was visited and at the end of the lane, survey was continued on lane on left turn to the initial lane till sample size of selected slum was completed. Before starting the study, methodology and procedure was reviewed and approved by teaching staff of Department of Community Medicine and the Institutional Ethical Committee Before commencement of the study, community leaders, Anganwadi workers, ANM, link workers in the study area were visited and rapport was developed with them. They were informed regarding the conduct of study. Data was collected by face to face interview of the respondents. Information as per pretested schedule was collected by interviewing women who had delivered in the period from January 2008 to December 2009. If there was no woman in the house satisfying the inclusion criteria then that house was skipped and next house was visited. If there were more than one woman in the house satisfying the inclusion criteria, then all were selected to participate in the study. This survey method was adopted in all selected PSUs. Thus total 400 women from the selected PSUs were included in the study. All the informants were informed about the nature and consequences of the study.

After obtaining informed verbal consent, they were interviewed. A pre designed and pre tested semi structured proforma was used for the collection of required information from respondents. They were assured of confidentiality about information obtained from them. Relevant information about the Intranatal care service utilization was recorded along with the socio-demographic data. Analysis was done using appropriate statistical measures like proportions.

RESULTS

Distribution of study population according to socio-demographic factors: Majority of the women were in the age group 20-29 years 84.25%and 74. 94% husbands were in the age group of 25 to 35 years. Maximum number of women i.e. 35.75% were educated up to secondary school. 30.08% husbands were educated up to secondary school. Maximum number of husbands 52.63% were unskilled workers. 67.25% women belonged to socioeconomic class IV according to Modified Kuppuswamy scale. Majority of the deliveries were of the birth order ≥ 2 (71%) (Table 1)

Table 1: Socio demo graphic profile of Study population (n = 400)

Socio demo graphic characteristic		Frequency	%
Age of Women	<20 years	26	6.5
	20—24 years	220	55
	25-29 years	117	29.25
	≤30 years	37	9.25
Age of Husband	<25 years	23	5.76
	25-29 years	182	45.61
	30-34 years	117	29.32
	≥35 years	77	19.30
Education of women	Illiterate	51	12.75
	Up to Primary school	27	6.75
	Up to Highschool	260	65
	Intermediate /Diploma	48	12
	Graduate and above	14	3.5
Education of Husband	Illiterate	54	13.53
	Up to Primary school	32	8.02
	Up to High school	188	47.18
	Intermediate/Diploma	85	21.30
	Graduate and above	40	10.03
Occupation of women	Homemaker	365	91.25
	Working	35	8.75
	Unemployed	4	1.00
Occupation of Husband	Unskilled	210	52.63
	Skilled/Semiskilled	116	29.07
	Clerk, shop, farmer	40	10.03
	Professional	29	7.27
Religion	Hindu	90	22.5
	Muslim	179	44.75
	Buddhist	131	32.75
Type of family	Joint	226	56.50
	Nuclear	174	43.50
Birth order	1	116	29
	2	133	33.25
	3	87	21.75
	4	44	11
	>4	20	5
Socioeconomic status	Upper (I)	4	1
	Upper middle (II)	35	8.75
	Lower middle (III)	92	23
	Upper lower (IV)	269	67.25

INTRANATAL CARE SERVICE UTILIZATION

Place of delivery: Out of 400 respondents included in the study, 27 (6.75%) delivered in home. 373 (93.25%) respondents delivered in institutions. Out of all, 163 (40.75%) delivered in public health facility and210 (52.50%) delivered in private health facility.

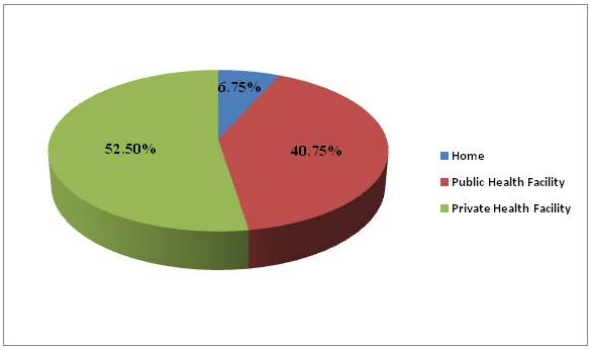

Figure1: Distribution of Place of Delivery

Delivery Care Providers: Out of 163 deliveries in public health facilities, 163 (100%)i.e. all were conducted by trained birth attendants. Out of 210 deliveries in private health facilities, 210 (100%) i.e. all were conducted by trained birth attendants. Out 27 home deliveries, 24 (88.89%) were conducted by untrained birth attendants and 3 (11.11%) were conducted by trained birth attendants (Table 2)

Table 2: Delivery care providers and place of delivery

Place of delivery	Delivery care provider		Total
	Trained birth attendant	Untrained birth attendant	
Public health facility	163 (100%)	0	163 (100%)
Private health facility	210 (100%)	0	210 (100%)
Home	3 (11.11%)	24 (88.89%)	27 (100%)
Total	376 (94.00%)	24 (6 %)	400 (100%)

Factors affecting intranatal care utilization: Women's age and education, husbands education and birth order was found to be significantly associated ($p<0.05$) with intranatal care service utilization while no significant association was observed between intranatal care service utilization and women's occupation, husbands occupation, socioeconomic status, religion and type of family ($p>0.05$) (Table 3)

Table 3: Association of place of delivery with various socio-demographic factors

Socio-demographic factors		Place of delivery				X^2	P value
		Institution		Home			
		N	%	n	%		
Age of women	<24 years	235	95.53	11	4.47	5.270	<0.05
	≥25 years	138	89.61	16	10.39		
Women's education	Middle school and below	174	84.23	21	10.77	9.76	<0.05
	Secondary school and above	199	97.07	6	2.93		
Women's occupation	Housewife	341	93.42	24	6.58	0.09404	>0.05
	Working	32	91.43	03	8.57		
Socioeconomic status	I,II,III	126	96.18	5	3.82	2.66	>0.05
	≥IV	247	91.82	22	8.18		
Husbands education	Middle school and below	137	88.96	17	11.04	8.39936	<0.05
	Secondary	113	94.17	07	5.83		
	Higher secondary school and above	122	97.60	03	2.40		
Husbands occupation	Semiskilled and above	177	95.68	8	4.32	3.619	>0.05
	Unskilled and below	195	91.12	19	8.88		
Type of family	Joint	215	95.13	11	4.87	0.8608	>0.05

	Nuclear	158	98.80	16	9.20		
	Hindu	84	93.34	06	6.66	0.16174	>0.05
Religion	Muslim	166	92.74	13	7.26		
	Buddhist	123	93.89	08	6.11		
	1	111	95.69	5	4.31		
Parity	2	128	96.24	5	3.76	7.8609	<0.05
	≥3	134	88.74	17	11.26		

DISCUSSION

Place of delivery: In this study conducted in urban slums, 6.75% respondents delivered in home. 93.25% respondents delivered in an institution out of which 40.75% delivered in public health facility and 52.50% delivered in private health facility A high proportion of institutional deliveries have been reported in two studies conducted in Mumbai city (90%). In other studies/reports from urban/ periurban areas of South Delhi (79%)[11], slums in New Delhi (68.2%)[12], slums in Lukhnow city (48.2%)[13], slums of Indore city (27.9%)[14] and in slums of Meerut city (27.2%)[15]of the country the proportion of institutional deliveries varied from 27.2% to 90%.

Delivery care providers: In the present study, 94% of deliveries were conducted by trained persons out of which 90.75% were conducted by doctors and 3.25% by nurses or ANM. Remaining 6% deliveries were conducted by untrained persons out of which 3.75% were by traditional birth attendant, 0.25% by other health personnel, 1.75% by relatives or friends and 1(0.25%) delivery at home was conducted without any assistance. A total of 88.89% home deliveries were conducted by untrained birth attendants and 11.11% were conducted by trained birth attendants Only one study by Varma DS *et al.*[16] has reported that 98% of all deliveries were conducted by trained birth attendant. In other studies/reports attendance of delivery by trained birth attendants was 34.7 in slums of Meerut city[15], 71% in urban areas of Varanasi[17], 70% in 30 villages of Nanded district[18]. varied from 18.1% to 85.7%. Women's age and education, husbands education and birth order was found to be significantly associated ($p<0.05$) with intranatal care service utilization In a study conducted by Das et[19] in 48 slum communities in six wards of Mumbai significant association was reported between place of delivery and age of women, women education. Pandey S *et al*[20] observed education of mother played a crucial role in making decision about place of delivery ($p<0.001$).

CONCLUSION

Physical accessibility to services does not necessarily lead to service utilization. Social and cultural accessibility is as important as physical accessibility. One of the socio-demographic goals mentioned in the National Population Policy 2000 of India is to achieve 80% institutional deliveries and 100% deliveries to be assisted by skilled health personnel by 2015. A high proportion (93.25%) of respondents in the urban slums utilized institutional services for intranatal care. However only 94% deliveries were assisted by traditional birth attendants and only 11.11% of home deliveries were assisted by trained birth attendants. Hence in order to achieve the second goal it is imperative to increase the proportion of institutional deliveries. Institutional delivery is only way to ensure provision of care by trained birth attendants during delivery. The risk factors identified for home deliveries are low educational status of respondents and their husbands and high parity. Respondents with these characteristics should be identified and motivated for institutional delivery.

LIMITATIONS

The findings of the study can be generalized to all the slums in a city but may not be generalizable to other slums with different socio demographic characteristics and availability of health services. The awareness and perception of the community about need for institutional delivery has not been studied. This needs in-depth study for which qualitative research methodology is suitable

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Source of Support: None Declared
Conflict of Interest: None Declared