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Does Development Lead to Narrowing the Gap in Maternal Health Care Utilization among Social Groups? The Evidences of Haryana

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Abstract

One of the Millennium Development Goals (MDGs) during ICPD 1994 was to improve the maternal health targeting at reducing the maternal mortality ratio by three-quarters and improving the infant and child mortality ratio between 1990 and 2015. India took several steps to reduce such deaths and improve the health status through universal health plans since after its independence. Except the economic and educational status, the social structure also plays an important role to determine the level of utilisation of such health services. Haryana consists of about 20 percent of its population comes under different 37 class of schedules castes that has identified by the government of Haryana. Now these castes are becoming more aware, educated and the part of mail stream and hence, it helps to narrow the gap of health care utilisation among all these social groups. With this background, the prime objective of the paper is to examine the level of inequalities of maternal and child health care services among social groups women especially in SCs and Other Castes in Haryana. By using the DLHS data of third round, Bivariate, multivariate regression model and concentration indices have been employed to analysis the data. Concentration index and curve has been used to show the level of inequality in MCH care among social groups. The preliminary results illustrated that there are very fewer differentiations among the social groups regarding the utilisation of maternal health care services. The result of concentration indices shown the gap among the Scheduled Castes and other caste group were very narrow or about to invisible.

Keywords: Antenatal Care, Safe Delivery, Haryana, Scheduled Caste, Concentration Indices

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Introduction:

The first five goals of the Millennium Development Goals (MDGs) during ICPD 1994 were entirely focused on development, prosperity and health with specific context of women. To eradicate extreme poverty, improving basic education by making its universal and through that promote gender equality and women empowerment and resultant to that, it would be translated into improving the maternal health by reducing the maternal mortality ratio by three-quarters in twenty-five years and to achieve universal access to maternal health care by 2015. About three lakh women died in 2013 due to maternal causes during and after pregnancy and childbirth and about 99 of these deaths contributed by developing nations (Rai, 2014; WHO, 2014). India took several steps to reduce such deaths and improve the health status through universal health plans since after its independence. The National Health Policy of 1983 that came into light with aimed at Health for all by 2000 through universal, comprehensive primary health services had failed due scarcity of financial resources and public health administrative capacity. Since India has a highly complicated social structure with having some different castes and classes, it makes much difficult to achieve the universal goal of health access to all by many folds.

In India, roughly 3000 'Castes' estimated to exist, out of that 779 have been designated as per Article 341 of the Constitution of India, as belongs to Scheduled Castes who inhabit the lowest rank in the ritual hierarchy of our society and engage them of agricultural labourers with minuscule land holdings**.** Historical experiences said that these Scheduled Castes included the communities who were untouchable and suffered from many social restrictions (Asrani & Kaushik, 2011). Haryana is one of the developed states of India and consisting of about 20 percent of its population from different 37 class of schedules castes that has identified by the government of Haryana (Census of India, 2011). Due to being the part of the developed region, the state of Haryana, these all castes are reaping about to equal social, economic and educational facility. Certainly, this could not achieve in a single day, but due their participation in the mainstream of development and many fold efforts of government through several policies and their proper implementations, it could gain, and the level of inequality has been narrowed down. Although the workforce participation of women is still low in the state, the gap regarding the social castes is narrowing by the time since last decade. The good proportion of these SCs populations is landless so as an alternate for livelihood to workforce participation in other sectors like secondary and tertiary, they became aware and educated themselves and were in the mainstream of development by enhancing their economic status. So there is a need to research the level of reduction in social inequalities in accessing their basic familial needs like maternal health care services through the development process by considering their background characteristics. With this background, the prime objective of the paper is to examine the inequalities of maternal and child health care services in SCs women in Haryana and its determinants factors.

Methods and Materials:

Data

The Study has used the third round of District Level Households and Facility Surveys of 2007-08. This survey has covered the entire states of India at the district level and collected the information from more than seven lakh women. Out of that for our study 6817 (women 1722 from SCs categories and 5095

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women from other castes) women were eligible from the state of Haryana. The information was collected regarding the heath care status and utilisation of their basic health care services specifically in reproductive and maternal health care. The reference period of the survey was the three years preceding the date of the survey.

Methodology

Bivariate was used to find the prevalence of three maternal health care services utilisation in scheduled castes and making its comparison with other castes. Multivariate Regression Model was used to predict the odds ratio and to understand the prime determinates of those maternal health care services utilisation. Concentration index was used to show the level of inequality in utilisation of maternal health care among the social group by their wealth index.

Research tools:

Outcome variables

1. ***Full Antenatal Care (ANC):*** Full Antenatal Care (Full ANC) has been defined as at least three antenatal care visits, consumed 90+ Iron Folic Acid (IFC) tablets and took two or more tetanus toxoid injections.

2. ***Safe Delivery:*** It defined as either institutional delivery or home delivery assisted by a doctor, auxiliary nurse midwife, nurse, midwife, lady health visitor or any other health personnel.

3. ***Postnatal Care* (*PNC):*** Postnatal Care indicates whether the women received any checkups of her health within two weeks after the delivery of the child.

Predictor Variables

Mother's age at childbirth, Birth Order, Type of Locality, Mother's Educational Years, Husband's Education, Wealth Index, and Mother's working and Have a BPL card.

Research Findings

Utilisation of Maternal Health Care Services in Scheduled Castes Community in Haryana

The result of bi-variate analysis had shown the prevalence of Maternal and child health care utilisation among Scheduled caste women with comparing the other castes of women in Haryana (**Table 1**). It has shown that lower birth order, mother's education, and husband's education, type of locality wealth index and working of the mother are the most important characteristics that influence the maternal health care utilisation not only among the SCs women but in other caste too. Caste itself played a role to access the basic health facility. In the lower age group of mother, the difference of maternal care services utilisation was lowest among SCs and other caste of women. And it was 6.6% to 10%, 52.5% to 53.7% and 44.4% to 46.5% for full ANC, safe delivery and postnatal check up in SCs and others categories of women respectively.

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Table 1: Percentage distribution of utilisation of maternal health care services in scheduled castes community in Haryana, DLHS-3, 2007-08

Background Characteristics	Full Antenatal Care				Safe Delivery				Post-Natal Care			
	SCs		Others		SCs		Others		SCs		Others	
	n	%	n	%	n	%	n	%	n	%	n	%
Mother Age at Child Birth												
<20 year	13	6.6	53	10.0	104	52.5	284	53.7	88	44.4	246	46.5
20-29	140	11.1	581	15.1	555	44.0	2304	59.7	528	41.9	2093	54.2
30 & Above Years	25	9.5	89	12.6	102	38.6	327	46.3	73	27.7	347	49.1
Birth Order												
1	61	14.1	326	19.7	282	65.3	1198	72.5	241	55.8	1038	62.8
2-3	83	10.2	353	14.2	337	41.5	1424	57.3	314	38.6	1305	52.5
4 and Above	28	6.3	40	4.4	121	27.2	259	28.7	122	27.4	315	34.9
Place of Residence												
Rural	124	9.4	412	10.9	539	40.7	1959	51.6	500	37.7	1873	49.3
Urban	54	13.6	311	24.0	222	55.9	956	73.8	189	47.6	813	62.7
Mother's Education												
0-4 Years	6	4.9	7	4.0	43	35.2	90	51.1	37	30.3	87	49.4
6-9 Years	64	10.4	166	10.7	282	45.8	877	56.4	271	44.0	756	48.6
10 and Above Years	54	22.6	503	27.7	168	70.3	1511	83.3	147	61.5	1311	72.2
Husband's Education												
0-5 Years	4	3.6	8	5.6	45	40.2	44	30.6	49	43.8	56	38.9
6-9 Years	62	8.9	116	7.5	292	41.9	721	46.5	255	36.6	700	45.2
10 and Above Years	84	16.7	579	21.1	284	56.3	1974	72.0	253	50.2	1722	62.8
Wealth Index												
Poor	14	5.8	5	1.3	71	29.2	63	16.9	75	30.9	112	30.1
Middle	39	7.2	39	4.3	188	34.7	288	32.1	172	31.7	326	36.3
Rich	125	13.3	679	17.8	502	53.6	2564	67.0	442	47.2	2248	58.8
Mother's Work Status#												
Yes	18	9.3	42	9.6	76	39.2	199	45.6	73	37.6	213	48.9
No	123	11.3	548	15.6	530	48.7	2217	63.0	482	44.3	1962	55.7
Have BPL Card												
Yes	57	10.8	55	8.8	223	42.3	274	43.6	195	37.0	269	42.8
No	120	10.1	665	15.0	535	44.9	2632	59.2	492	41.3	2407	54.1

Note: # Working Status in last 12 months,
BPL Card: Below Poverty Line card

Rural has a lower gap in utilising the maternal care services among SCs and other caste women compare to their counterpart of urban resident women. In the poor category of households, SCs women were much

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better than other castes women to utilise the basic all maternal services. Working mother from scheduled castes is more able to utilise the maternal health care and narrowing the gap among caste based disparities. Having BPL (Below Poverty Line) card is also empowering the scheduled castes women, and there were able to access the maternal health care services as about the level of other castes women who went for these basic health services. Hence, the result from every individual predictor variable clearly reflects that although there is a gap for utilisation of maternal health care among the scheduled caste and other caste but this gap is very narrow.

Determinants of MHC services in SCs women in Haryana

Table 2 illustrated the determinants of full ANC care, Safe delivery services utilisation and PNC (postnatal care) services used respectively by SCs community women in Haryana.

Table 2: Result of Logistic Regression (Odds Ratio for the CI of 95%) showing the determinant of Full ANC, Safe Delivery and PNC services in SCs women in Haryana, DLHS-3, 2007-08

	Full ANC			Safe Delivery			PNC		
Covariates	**Exp(B)**	**95% C.I.**		**Exp(B)**	**95% C.I.**		**Exp(B)**	**95% C.I.**	
		Lower	**Upper**		**Lower**	**Upper**		**Lower**	**Upper**
Mother Age									
<20 Years®									
20-29 Years	2.876**	1.235	6.696	1.710*	1.013	2.886	0.715	0.437	1.168
30 and Above	4.094**	1.311	12.782	3.974***	1.756	8.991	0.656	0.307	1.399
Birth Order									
1st Order®									
2-3 Order	0.545**	0.341	0.871	0.319***	0.217	0.471	1.644***	1.153	2.346
4 and Above	0.338**	0.141	0.815	0.159***	0.086	0.295	2.281***	1.298	4.009
Mother's Education									
0-5 Years®									
6-9 Years	3.682**	1.108	12.235	1.453	0.835	2.527	0.496**	0.285	0.864
10 and Above	5.703***	1.639	19.845	2.495***	1.303	4.780	0.334***	0.176	0.632
Wealth Index									
Poor®									
Middle	1.360	0.429	4.309	2.568*	1.087	6.066	0.850	0.401	1.802
Rich	1.116	0.368	3.383	3.468***	1.522	7.902	0.575	0.282	1.176
Place of Residence									
Rural®									
Urban	1.614**	1.007	2.587	2.159***	1.466	3.181	0.873	0.612	1.245
Working Status#									
Yes®									
No	0.783	0.361	1.699	0.944	0.534	1.669	1.273	0.742	2.184
Have BPL card									
Yes®									
No	0.979	0.601	1.596	0.839	0.586	1.202	0.940	0.669	1.319

Note: # Working Status in last 12 months;
Level of Significance**:** ***p<0.01; **p<0.05; *p<0.1 (at 95% of CI);
®: Reference category

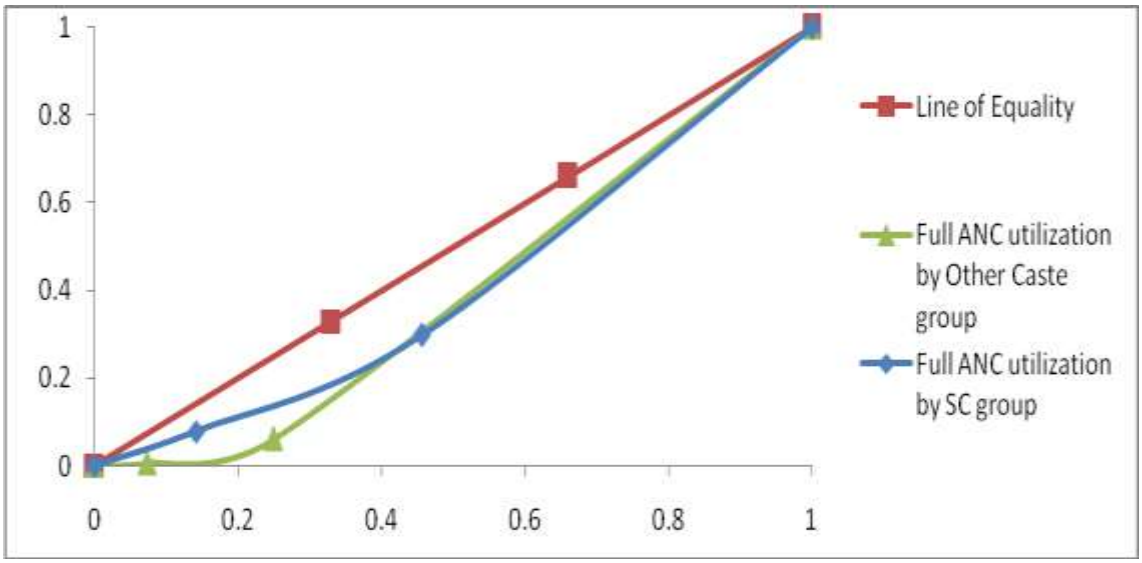
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Table 2 illustrated the determinants of full ANC care, Safe delivery services utilisation and PNC (postnatal care) services used respectively by SCs community women in Haryana. In the case of full ANC care utilisation, Mother's age, her education, birth order of the child and place of residence was significant determinant, and the similar trend has been seen for other caste women too. The mother of 20-29 years and 30-39 years of age were two times (OR=2.876, 95% CI=1.235- 6.696) and four times (OR=4.094, 95% CI=1.311- 12.782) more likely to have the full antenatal care to their reference category of less than twenty years of age in scheduled caste group. More than one birth order was less likely to have for full ANC care services utilisation in SCs caste women. Mother's education of more than ten years was five times more likely (OR=5.703, 95% CI=1.639-19.845) to use the full ANC services in SCs women.

For safe delivery services, all factors for higher ANC utilisation and with the addition of wealth index were working as prime responsible. In SCs women, all significant variables of full antenatal care along with mother's education and wealth index of households and place of residence was highly significant determinants for safe delivery services. The women who were more than ten years of schooling were two times more likely (OR=2.495, 95% CI=1.303-4.780) than their reference years of schooling group. The rich index SCs women were three times more likely (OR=3.468, 95% CI=1.522-7.902) to go for safe delivery services than their reference category women. The SCs category of women who resided in urban was two times more likely (OR=2.159, 95% CI=1.466-3.181) than rural resident SCs women. In postnatal care services, the number of births and years of schooling were the significant factors in SCs women. The women who were birth order more than one were more likely to have the postnatal care services utilisation. Other than that year of schooling show the adversely significant factor.

Inequality in utilising the maternal health care service among SCs and Other castes women

Figure 1.a: Inequality in utilising the service of Full ANC care, DLHS-3, 2007-08



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Figure 1(a, b & c) shows the concentration curves are showing inequalities in Maternal Health Care services by Wealth Index of SCs Mothers in Haryana. The figure clearly illustrated that the concentration curve that represents the SCs categories, and other caste were overall overlap to each other except the poor category for full ANC, safe delivery and postnatal care services. It shows that there is no any considerable gap in utilisation of maternal health care services among SCs caste women and other castes. Even the non-poor SCs women were in better position in the utilization of maternal health care services as they indicate slightly over than the line of equality than the other caste line of equality.

Figure 1.b: Inequality in utilising the service of Safe Delivery care, DLHS-3, 2007-08

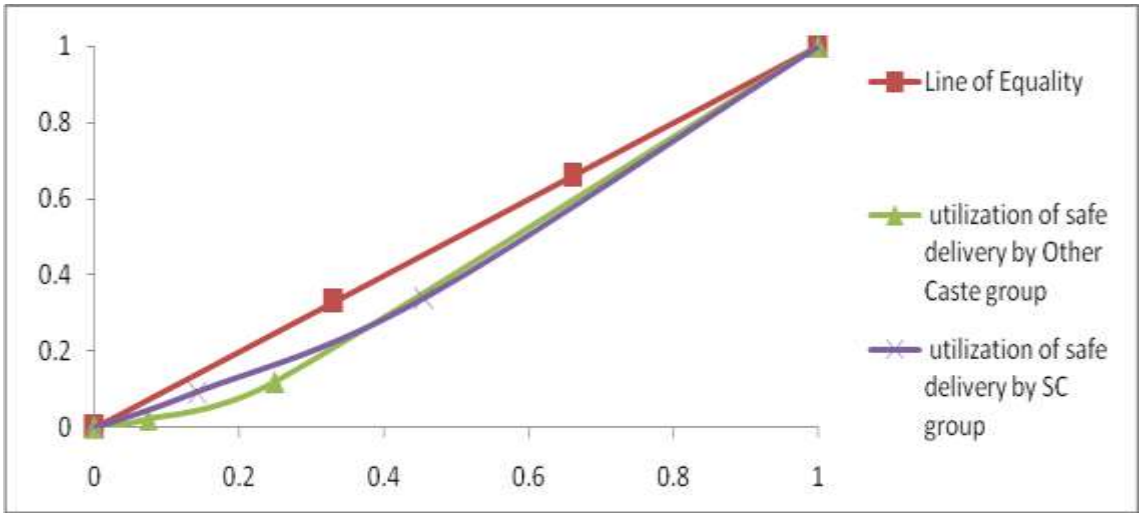
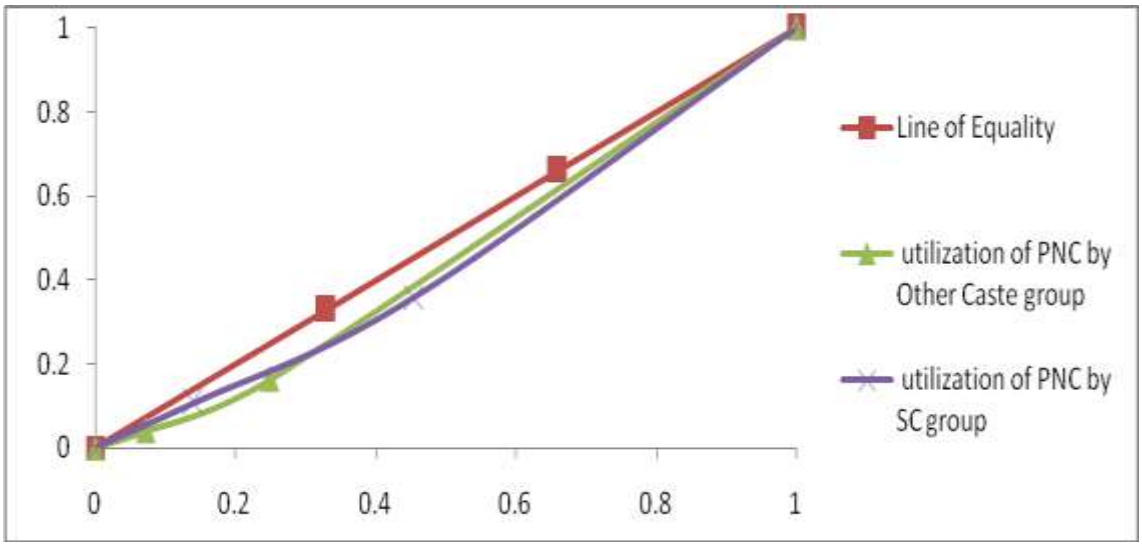


Figure 1.c: Inequality in utilising the service of PNC care, DLHS-3, 2007-08



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Discussion:

Several numbers of the governmental and non-governmental organisation made their efforts to enhance the level of maternal health care services and made it more accessible and effective in the last decade. Early marriages of the girl and its negative impact on their health have been seen widely (UNICEF, 2005; Fatusi & Hindin, 2010). In most of the developing countries, we found that younger age mother was severe threatening towards delivery complications, which enhances the chances of death of the mother or poor health of mothers (Omar et al., 2010; Rasheed, Abdelmonem & Amin, 2011; Stewart, Sommerfelt, 1991). Studies from developing countries illustrate that women, for their first delivery, are significantly more likely to utilise the maternal healthcare services (Akin & Munevver, 1996; Celik & Hotchkiss, 2000; Bell, Curtis & Alayon, 2003; Rahman et al., 2007). Literature suggested that the women who were less educated or from the poor socioeconomic stratum, so due to lack of knowledge and due to time and resource constraints, she does not expose towards safe delivery (Elo, 1992, Bhatia, & Cleland, 1995; Raj et al., 2009). To improve the level of maternal health services, a more comprehensive and people participation based approaches are needed in rural population.

Child marriage was directly linked to the low level of educational attainment. It is further associated with starting childbearing at younger and high order of births with narrow birth intervals among young age mothers of the Hausa/ Fulani/Kanuri social groups and significantly influences their healthcare utilisation (Rahman et al., 2007; Antai, 2011). So this study underscores about spreading awareness by community-based interventions that can change the behaviour and mentality of this underserved social group about their specific health-damaging cultural norms and perceptions. This study illustrates that the utilisation of ANC, safe delivery and PNC services were significantly associated with educational attainment. Similar results have been found in other studies in India (Singh, Rai & Singh, 2011; Rai & Chauhan, 2014; Chauhan & Rai, 2015) shown that women's education is an important indicator that influences the maternal health care services utilisation highly, even in the lower social group too.

Since the teenage mother has less exposure of education and rare chances to engage for earning, hence there may be minimum chances for her to expand the good health care. A community-based approach must be needed for utilisation of maternal health care services that target the special group of poor and especially teenage mothers. The findings of the study also shows the significant positive effects of the educational attainment on maternal health service utilization among teenage mothers and are consistent with other studies from developing African countries (Magadi, Agwanda, & Obare, 2007; Mpembeni et al. 2007; Ogunlesi, 2010; Ogunlesi, & Ogunlesi, 2012) and in India too (Singh, Rai & Singh, 2011; Singh et al., 2012; Rai & Chauhan, 2014; Chauhan & Rai, 2015). Probably educated women have better access to health services and related information. Along with that she had improved perceptions of the root causes of disease and can utilise such information optimally. So for that, there is a positive association between mother education, place of residence and maternal health service utilisation has been seen (Antai, 2011; Chauhan & Rai, 2015).

Conclusion:

The study showed that the women's empowerment through accessing the education and workforce participation and have an opportunity to live those places where there is much scope to get aware. These

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all collectively contributed to the multidimensional development and it is playing a much vital role to improve the maternal health care utilisation even among those sections of the population which have considered much deprived regarding social and economic perspective. The introduction of governmental tools like BPL card, through policy-making and its proper implementation also help to reduce the gap of basic health care utilisation among different social groups. The result of the study has reflected that the women who belong to lower social status has also improved their level of accessing and utilisation of the basic MCH care services, and hence it comes through the continuous social and economic development of every such individual. So to enhance the status of such women, the equity approach is required with governmental and non-governmental efforts and actively people participation especially the women.

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