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Gender and Caste-Based Inequality in Health Outcomes in India

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Foreword

The Indian Institute of Dalit Studies (IIDS) was established in 2003 as a not-for-profit autonomous institution. The Institute's goal is to undertake research; provide knowledge support to civil society organisations and policy inputs to the government; function as a resource centre for academicians, researchers and activists; and build up literature and database on the most complex and challenging issues which confront the Indian society as well as societies in different countries. The special focus of the Institute is on the development concerns of various excluded and discriminated groups in Indian society who experience social exclusion on account of their identity and origin in terms of caste, ethnicity, gender, religion, colour, disabilities, and regional or group identities. The Working Paper Series disseminates both empirical and theoretical findings of ongoing research on issues which pertain to forms and nature of social exclusion and discrimination, and inclusive policies for marginalised social groups in Indian society and in other countries.

This Working Paper '**Gender and Caste-Based Inequality in Health Outcomes in India**' provides evidence that women in India are not uniformly disadvantaged. For most health indicators, the status of women from 'excluded groups' such as Scheduled Castes is significantly worse than that of higher castes groups. Regression and discrimination analysis (Oaxaca type) are carried out to ascertain if variation in health outcomes across social groups can be ascribed to discrimination. Data from Morbidity and Healthcare Survey conducted by the Government of India's National Sample Survey Organisation between January and June 2004 shows that women who belong to lower castes such as former untouchables (Scheduled Castes) have worse health and mortality indicators and poorer access to health services than women from higher castes. These differences are often closely associated with high incidence of poverty, and low levels of education and access to sanitation. In case of Scheduled Castes women, even after consideration of other socio-economic factors like poverty and low education, discriminatory access to healthcare services also results in poor health outcomes. The paper develops insights in the underlying causes of these differences and shows how maternal mortality rates are the final outcome of whole series of deprivations that cause Scheduled Castes women to have far higher mortality rates than women from other social groups.

The paper discusses while health outcomes such as age at death and access to reproductive health services are closely linked with levels of income, education and sanitation, social identity is an additional factor which aggravates inequalities in health outcomes. It provides evidence from field-based studies on the role of caste- and untouchability-related discrimination and exclusion faced by Scheduled Castes in access to healthcare services for women. In the end, the paper indicates the policy implications of the analysis to promote non-discriminatory access of Scheduled Castes to health services.

Nidhi Sadana Sabharwal
Director, IIDS

Contents

I. Introduction	5
Context	5
2. Age at Death	7
Estimation and Decomposition	8
3. Prenatal and Post natal Care	10
4. Caste Discrimination and Exclusion as a Factor in Access	11
A. Discrimination in Rural Labour Market	12
B. Discrimination in Access to Public Health Services	12
C. Discrimination in Access to Drinking Water	13
D. Discrimination in Access to Food Security	14
5. Conclusion and Policy Recommendations	14
Endnotes	
References	

I. INTRODUCTION

Unlike women from other social groups in India, Dalit women face three overlapping disadvantages. First, they face the disadvantage of being women with all the attendant difficulties of living in a male patriarchal society. Secondly, they suffer the disadvantage of being Dalit as they face the opprobrium that higher caste Hindu society instinctively heaps upon the lower castes. Thirdly, by virtue of being Dalit they are more likely to spend a lifetime in poverty. Given this trinity of disadvantages, the problems of Dalit women are distinct from, and arguably considerably more severe than, that of higher caste women who apart from gender handicap are not burdened by perceptions of inferiority or by a life of poverty. This is evidenced by the fact that, compared to higher caste women, human development outcomes are far more inferior for Dalit women. In 2001, a lower proportion of Dalit women (41 per cent) in rural areas were literate as compared to 58 per cent non-Dalit women. While nationally (across rural India) about 40.5 per cent of all women were underweight, the incidence of undernutrition was eight per cent higher for Dalit women. Moreover, Dalit mothers and their children had relatively poor access to public health services as compared to other social groups. For example, Dalit children from these excluded groups had an immunisation rate which was 20 per cent lower than that for non-Dalit and non-tribal children.

This paper argues that high deprivation levels of Dalit women can be attributed to social exclusion. The social exclusion and associated discrimination of Dalit women result from their caste identity. It is this 'exclusion-induced deprivation' which differentiates Dalit women from the rest of the women. It would be naive to claim that Dalit women face problems 'just like' other (non-Dalit) women. In addition to being women, they are burdened by their caste and poverty which are concomitant of their caste and gender.

Against this background, this paper investigates inequalities in health outcomes among Indian women who belong to different social groups with respect to: (i) their age at death; and (ii) their likelihood to receive prenatal and post natal care.

The analysis in this paper provides evidence on discrimination as additional cause of inequalities in health outcomes amongst women in India through statistical techniques and field-based studies.

Context

In a recent paper on health inequalities in India, Borooah (2010) found that there was a social gradient to health in India with respect to four health outcomes: age at death; self-assessed health status of elderly persons; likelihood of elderly persons, who were in poor health, to take treatment for their ailments; and likelihood to receive prenatal and post natal care. The evidence suggested that living in a forward state (compared to living in a backward state) and belonging to a relatively affluent household significantly improved all the four above-mentioned health outcomes. In addition, age at death and self-assessed health status of elderly persons were significantly affected by the living conditions of their households. The level of education of persons exercised a significant influence on their likelihood to receive treatment or care.

It is interesting to note that even after controlling the 'group independent' factors, the social group to which people in India belongs has a significant effect on their health outcomes. For example, compared to (higher caste) Hindus, the average age at death in India—after controlling for group independent factors like income, age, state of residence—was 4.9 years lower for *Adivasis*, 7.1 years lower for Dalits and 6.1 years lower for Muslims. Similarly, compared to elderly Hindus, elderly Dalits, Other Backward Classes (OBC) Muslims, and non-OBC Muslims were—after imposing all the controls—more likely to be in poor health by 2.6 point, 5.5 point and 8.1 point respectively. His results offered prima facie evidence of a social group bias to health outcomes in India.¹

A deficiency of such purely caste-based analysis, however, is that it takes no account of gender. By emphasising health outcomes solely in terms of caste and religion it assumes away any differences in health outcomes between men and women that may be the consequence of gender. While it is true that Dalits in general are oppressed, Dalit women bear

disproportionately higher share of this burden. Given the division of labour within the household, women have to suffer more from lack of access to water, fuel sources and sanitation facilities which expose them to humiliation and violence from higher caste women who are often the perpetrators of oppression (Malik, 1999). In particular, issues of childcare and health are relegated to the background in the struggle for subsistence.² Compounding these gender issues are issues of untouchability. Speakers at the 'Convention against Untouchability and Dalit Women's Oppression' spoke about the ubiquity of untouchability—on public roads, in schools, in teashops, at work—with the threat of violence and rape being ever present for Dalit women who transgressed the norms of untouchability.³

The relevance of the above discussion lies in the fact that such discrimination leads to anxiety and stress in Dalit women which in turn affect their health. The stress hormones that anxiety releases affect cardiovascular and immune systems with the result that prolonged exposure to stress is likely to inflict multiple costs on health in the form of inter alia increased susceptibility to diabetes, high blood pressure, heart attack and stroke (Marmot, 1986; Brunner and Marmot, 1999). So, the social gradient in health outcomes may have a psychosocial basis which relates to the degree of control that individuals have over their lives.

In addition, Dalit women are routinely denied health services that higher caste women take for granted. Using National Sample Survey data, Borooah (2010) showed that compared to 15 per cent higher caste Hindu women who did not receive prenatal care, such care was not received by 26 per cent Dalit women. Similarly, compared to 27 per cent higher caste Hindu women who did not receive post natal care, such care was not received by 37 per cent Dalit women. Against this background, the purpose of this paper is to examine two of the four health outcomes analysed by Borooah (2010), i.e. age at death and the likelihood to receive prenatal and post natal care, with a view to investigate their caste and gender dimensions.

We answer the above questions using data from the Morbidity and Healthcare Survey (M&HC

Survey). The survey was conducted in all the states and Union Territories of India between January and June 2004 by the Government of India's National Sample Survey Organisation (NSSO).⁴ The survey covered 73,868 households encompassing 3,83,338 individuals. It examined several aspects of morbidity and healthcare of the respondents. However, from this study's perspective, the three important aspects are:

- i. Particulars of household members who died in the past 365 days
- ii. Particulars of economic independence and ailments on the date of survey of persons aged 60 years and above (hereafter, referred to as elderly persons)
- iii. Particulars of prenatal and post natal care for ever married women

The above aspects of morbidity and healthcare could inter alia be correlated with the social background of households to which respondents belonged. The M&HC Survey offered information about households in terms of inter alia the following social groups.

1. *Adivasis*⁵
2. Dalits⁶
3. Muslims (OBC)⁷
4. Muslims (non-OBC)
5. Hindus (OBC)
6. Hindus (higher caste)⁸

The primary aim of this paper is to examine whether the following health outcomes varied systematically according to a person's gender and the social group to which she/he belonged.

- i. Age of death
- ii. Likelihood of women to receive prenatal and post natal treatment
- iii. Self-assessed health status of persons aged 60 years and above
- iv. Likelihood of elderly persons, who were in poor health, to take treatment for their ailments

The purpose was to investigate whether, after controlling for several non-group factors those may impinge on health outcomes, people's health outcomes were significantly affected by their gender and social group. A gender effect would suggest that women from particular groups were disadvantaged in terms of health outcomes relative to women from

Table 1: Average age at death by gender and social groups (mean years)

Dalits		<i>Adivasis</i>		Muslims (OBC)		Muslims (non-OBC)		Hindus (OBC)		Hindus (Higher Caste)	
Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
43.6	39.5	46.5	40.0	40.0	47.8	40.5	50.1	49.2	48.1	55.0	54.1

Note: Only non-pregnancy deaths for women

Source: NSS 60th Round, Health File

other groups and also disadvantaged relative to men in their group. The existence of a ‘social group effect’ would suggest that people who belong to groups higher up the social ladder had better health outcomes than people who belong to the lower rungs.

2. AGE AT DEATH

The M&HC Survey asked households if any of their members had died in the previous year. If the answer was in affirmative, the survey collected information about the deceased and some of the circumstances which surround the deaths. In total, 1,716 deaths were reported of which 1,634 deaths (95 per cent) were from households which had experienced a single death in the past year; 70 deaths (four per cent) occurred in households which had experienced two deaths; and 12 deaths (one per cent) occurred in households which had experienced three deaths. Of these 1,716 deaths, 9.1 per cent were *Adivasis*, 17.6 per cent were Dalits, 12 per cent were Muslims and 21.3 per cent were Hindus. By contrast, *Adivasis*, Dalits and Hindus comprised 7.9 per cent, 16.9 per

cent and 23.6 per cent respectively of the total 383,288 persons in the M&HC–NSSO sample. Thus, in respect of *Adivasis* and Dalits, there was a difference between their proportionate presence in the number of deaths and their proportionate presence in the sample.

Table 1 shows the mean age at death by gender and social group. In terms of gender, the average age at death of Dalit women, at 39.5 years, was nearly fifteen years less than that for forward caste Hindu women and four years less than that of Dalit men. This was mirrored by the fact that the average age at death of Dalit men, at 43.6 years, was nearly eleven years less than that for forward caste Hindu men and five years less than that for Hindu (OBC) men.

Table 2 shows whether the deceased received medical attention before death. The group least likely to receive medical attention before death was *Adivasi*. Only 59 per cent *Adivasi* deaths received medical attention in contrast to 76 per cent Dalit deaths and 73 per cent Muslim deaths. Although, in terms of the overall sample, there was little difference between the proportions of men and women who

Table 2: Medical attention received before death by gender and social groups

	Total Deaths	Medical Attention Received Before Death as Percentage of Total Deaths	Total Male Deaths	Medical Attention Received Before Death as Percentage of Total Male Deaths	Total Female Deaths	Medical Attention Received Before Death as Percentage of Total Female Deaths
<i>Adivasis</i>	157	59	85	52	72	67
Dalits	302	76	166	80	136	71
Muslims (OBC)	82	73	46	70	36	78
Muslims (non-OBC)	123	74	73	70	50	80
Hindus (OBC)	573	69	338	66	235	74
Hindus (Higher Caste)	366	71	215	72	151	70
Total	1,714	70	985	69	729	71

Source: NSS 60th Round, Health File

received medical attention before death (69 per cent men, 71 per cent women) there were marked gender differences between some of the social groups. Muslim deaths were more likely to receive medical attention if they were women (80 per cent against 70 per cent for non-OBC Muslims) while Dalit deaths were more likely to receive medical attention if they were men (80 per cent against 71 per cent).

Estimation and Decomposition

Oaxaca type decompositions (based on evaluating different attribute vectors using a common coefficient vector) which yield different results depending upon the common vector employed and has been analysed

Table 3: The decomposition of the difference between higher caste and Dalit women in their average age at death

1	2	3	4	5
53.14- 39.01 = 14.13	53.14- 47.66 =5.48	47.66- 39.01 =8.65	50.08 - 39.01= 11.07	53.14- 50.08 = 3.06

Notes to Table 3

X^H and X^D are the variable vectors, and β^H and β^D are the coefficient vectors for higher caste women and Dalit women respectively.

Column 1: Observed Difference. Difference between higher caste women and Dalit women in the average age at death: $X^H\hat{\beta}^H - X^D\hat{\beta}^D$

Column 2: Social Status Difference. Difference between average age at death of higher caste women and what the average age at death of Dalit women would have been if their attributes had been evaluated using higher caste coefficients: $X^H\hat{\beta}^H - X^D\hat{\beta}^D$

Column 3: Social Capability Difference. Difference between columns 1 and 2 (residual) $\{X^H\hat{\beta}^H - X^D\hat{\beta}^D\} - \{X^H\hat{\beta}^H - X^D\hat{\beta}^H\} = X^D\hat{\beta}^H - X^D\hat{\beta}^D$

Column 4: Social Status Difference. Difference between what the average age at death of higher caste women would have been if their attributes had been evaluated using Dalit coefficients and the average age at death of Dalit women: $X^H\hat{\beta}^D - X^D\hat{\beta}^D$

Column 5: Coefficient Difference. Difference between columns 1 and 4 (residual),

$$\{X^H\hat{\beta}^H - X^D\hat{\beta}^D\} - \{X^H\hat{\beta}^D - X^D\hat{\beta}^D\} = X^H\hat{\beta}^H - X^H\hat{\beta}^D$$

in Table 1 showed that the average age at death for Dalit women (39.5 years) was 14.6 years less than the average age at death of higher caste women (54.1 years). We may think of this difference as being the result of two different sets of factors. The factors are:

1. **Social status:** Compared to higher caste women, Dalit women might be more likely to be at risk to mortality-inducing factors. So, Dalit women might be more likely than higher caste women to live in rural areas, in houses with poor sanitation and with limited access to safe drinking water. (The difference of 5.48 years in Column 2, Table 3, in longevity between Dalit women and higher caste women can be explained by higher risk of Dalit women to mortality-inducing factors.)
2. **Ability to tackle mortality inducing factors:** Even when higher caste and Dalit women were at risk to the same mortality-inducing factors, Dalit women might be more likely than higher caste women to die younger. This might be due to differences in the response to such factors caused by differences in literacy, stress and nutrition. (The difference of 8.65 years in Column 3 of Table 3 exists despite equivalent risks to mortality-inducing factors. This may be explained by differences in ability such as literacy and nutrition.)

Given these two effects—engendered, respectively, by differences between higher caste and Dalit women in social status, and in ability to tackle mortality-inducing factors—the need is for an integrative model to explain differences in the age at death of higher caste and Dalit women. In addition, it would be useful to quantify how much of the observed difference in the age at death between higher caste and Dalit women could be explained by differences between them due to their social status and how much could be explained by differences between them due to their capacity to tackle mortality-inducing factors. The purpose of this paper is to offer such quantification. We use Oaxaca type decompositions (based on evaluating different attribute vectors using a common coefficient vector) which may yield different results depending upon the common vector employed. First, we estimated an

econometric equation in which the dependent variable was age at death and the explanatory variables were the following.

1. **The household type in which the deceased lived was a 'labourer' household:**⁹ The observed difference between non-labourer and labourer households in the ages of their deceased was 6.9 years.
2. **The household was a rural household:** The average age of the deceased was significantly higher by 4.9 years in rural areas as compared to urban areas.
3. Whether the household lived in a 'forward' or a 'backward' state.¹⁰
4. **The type of housing structure in which deceased lived:** This variable (structure) was assigned the value 1 if the type was pucca, or semi-pucca, or 'serviceable' kutcha (i.e. good); and 0 otherwise.
5. **The quality of latrines used by deceased:** The variable 'latrine' was assigned the value 1 if latrines were flushing toilets or emptied into a septic tank, and 0 otherwise.
6. **The quality of drains:** The variable 'drain' was assigned the value 1 if the drains associated with the deceased's home were underground or were covered pucca, and 0 otherwise.
7. **The quality of the source of drinking water used by deceased:** The variable 'water source' was assigned the value 1 if the source of drinking water was from a tap, and 0 otherwise.
8. **Whether drinking water used by deceased was treated:** The variable 'water treated' was assigned the value 1 if the drinking water was treated, and 0 otherwise.
9. **If drinking water in deceased household was treated, what was the nature of the treatment of drinking water:** The variable 'water treatment' was assigned the value 1 if the nature of treatment was boiling, filtering, or ultraviolet/resin/reverse osmosis; and 0 otherwise.
10. **The nature of cooking fuel used by deceased household:** The variable 'cooking fuel' was assigned the value 1 if the cooking fuel was gas, gobar gas, kerosene, or electricity; and 0 otherwise.

This equation was estimated first on the sample of deceased Dalit women (135 observations) and then on the sample of deceased higher caste

women (150 observations).¹¹ Using these separate coefficients' sets one may decompose the difference in the average age at death between higher caste and Dalit women into two parts. The first due to caste differences in the values of mortality-inducing variables (social status effect) and the second due to caste differences in the coefficients associated with mortality-inducing variables (social capability effect). The social status contribution is computed by asking what the average Hindu Dalit difference in the average age at death would have been if the difference in the values of mortality-inducing variables between higher caste and Dalit women had been evaluated using a common coefficient vector. The critical question though is: What should be this common coefficient vector? Typically, two separate computations of the attribute contribution are provided using the higher caste and the Dalit (women) coefficient vectors respectively as the common vector.

Column 1 of Table 3 shows the difference between higher caste and Dalit women in their average ages at death, i.e. 14.13 years. Column 2 of Table 3 shows the overall gap of 14.13 years that is due to social status effect when the variable vectors for higher caste and Dalit women are both evaluated using higher caste coefficients. Similarly, Column 4 of Table 3 shows overall gap that is due to the ability effect when the variable vectors for higher caste and Dalit women are both evaluated using Dalit coefficients. Two points need to be mentioned about the social status effect. They are:

1. The size of the social status effect differs according to whether higher caste or Dalit coefficients are used in evaluation. The social status effect based on higher caste coefficients (Column 2) explains 39 per cent while the social status effect based on Dalit coefficients (Column 4) explains 78 per cent of the overall difference in ages at death between higher caste and Dalit women.
2. The average age at death for Dalit women rose whenever their variable vector was evaluated at higher caste coefficients while the average age at death for higher caste women fell whenever their variable vector was evaluated at Dalit coefficients. Consequently, compared to the

responses of Dalit women to a given set of values of mortality-inducing variables, the responses of higher caste women were more favourable to a higher life expectancy.

The considerable size of the response effect that influence the difference between higher caste and Dalit women in their average age at death can be explained in many ways.

1. First, terms like ‘bad sanitation’, ‘poor housing’ and ‘unsafe water supply’ are broad terms and within their rubrics might conceal several qualitative differences. So, there might be severe differences in quality of sanitation and water supply between Dalit and higher caste even when such factors might be termed ‘poor’.
2. The capacity to cope with such adverse circumstances might depend upon general health factors-like nutritional status and prior illnesses- or on human and social capital factors like literacy and access to information which might impact Dalit women more adversely.

3. PRENATAL AND POST NATAL CARE

The M&HC–NSSO provided information by social group on prenatal and post natal care received by ever married women below 50 years of age. Table 4 shows that compared to 15 per cent Hindu women who did not receive prenatal care such care was not received by 31 per cent *Adivasis*, 26 per cent Dalits, 33 per cent OBC Muslims and 26 per cent non-OBC Muslims. Similarly, compared to 27 per cent Hindu women who did not receive post natal care such care was not received by 44 per cent *Adivasis*, 37 per cent

Table 4: Proportion of ever married women who did not receive prenatal and post natal care

	Prenatal Care	Post natal Care
Dalits	26.2	36.5
<i>Adivasi</i>	30.5	43.7
Muslim (OBC)	32.7	36.4
Muslim (non-OBC)	26.1	34.5
Hindu (OBC)	22.7	31.3
Hindu (Higher Caste)	14.7	26.7
Total	23.5	33.2

Source: NSSO 60th Round, Health File

Dalits, 36 per cent OBC Muslims and 34 per cent non-OBC Muslims.

In order to determine the probabilities of women who received prenatal and post natal care, we estimated a logit model in which the dependent variable took the value 1 if the woman received the relevant care and 0 if she did not. Borooah (2010) showed that when the equation was estimated over all the women in the sample, the results led to the following conclusions.

1. The level of education of women had a significant effect on the probability of their receiving both prenatal and post natal care. Compared to an illiterate person (default level), the probabilities of receiving prenatal and post natal care were 9.0 and 4.0 points respectively higher for a person educated up to primary schooling (low education); 14.0 and 11.0 points respectively higher for a person educated above primary and up to secondary level; and 15.7 and 14.0 points respectively higher for a person educated up to higher secondary or more.
2. The economic position of women’s households exercised a significant positive influence on their probability to receive prenatal care but not on their probability to receive post natal care. Compared to women from households whose monthly expenditure was in the top quartile (control group), women from households whose monthly expenditure was in the lowest, second, and third quartiles were less likely to take treatment by 3.3, 4.5 and 2.0 points respectively.
3. However, even after controlling for all the above factors, the social groups to which women belonged had a significant effect on their probabilities to receive prenatal care. Compared to Hindus (control group), other groups were less likely to receive care.

In order to investigate the social group effect more rigorously, we estimated the prenatal care equation—for which the social group effect was most pronounced—separately for Dalit and higher caste women. The data showed that compared to 85.3 per cent higher caste women who received prenatal care only 73.8 per cent Dalit women received such care, a difference of nearly 12 points. As with the age at

death, we tried to explain this difference in terms of exposure and response.

1. **Social status:** Even when higher caste women and Dalit women were provided the same treatment-inducing factors, the response in terms to receive treatment might be less favourable for Dalit women as compared to higher caste women.
2. **Ability to access treatment inducing factors:** Compared to higher caste women, Dalit women might be less likely to treatment-inducing factors. For example, Dalit women might be more likely than higher caste women to have lower levels of education or to live in poorer households.

In order to quantify the contribution of these factors, we carried out the decomposition shown in Table 5.

Two points need to be mentioned about the exposure effect. They are:

1. The size of the social status effect differs according to whether higher caste or Dalit coefficients are used in the evaluation. The attributes effect based on higher caste coefficients (Column 2) explains 74 per cent while the social status effect based on Dalit coefficients (Column 4) explains 87 per cent of the overall difference between higher caste women and Dalit women in proportions who received prenatal treatment.
2. The average proportion for Dalit women rose whenever their variable vector was evaluated at higher caste coefficients. The average proportion for higher caste women fell whenever their variable vector was evaluated at Dalit coefficients. Consequently, compared to the responses of Dalit women to a given set of values of treatment-inducing variables, the responses of higher caste women were more favourable to a higher proportion who received treatment.

4. CASTE DISCRIMINATION AND EXCLUSION AS A FACTOR IN ACCESS

Many scholars have noted that Dalit women suffer from multiple disadvantages. The first disadvantage of Dalit women is that they are Dalits, the second is their gender, and the third is their poverty. In this paper we focused on the caste aspect of Dalit women's disadvantage by comparing their health outcomes in respect of age at death and proportions who

Table 5: The decomposition of the difference between higher caste women and Dalit women in proportion who received prenatal care

1	2	3	4	5
81.4-	81.4-	75.3-	80.3 -	81.4 -
73.2 =	75.3 =	73.2 =	73.2 =	80.3 =
8.2	6.1	2.1	7.1	1.1

Notes to Table 5

X^H and X^D are the variable vectors, and β^H and β^D are the coefficient vectors for higher caste women and Dalit women respectively.

Column 1: Observed difference. Difference between higher caste women and Dalit women in the average proportions to receive prenatal care: $X^H\hat{\beta}^H - X^D\hat{\beta}^D$

Column 2: Social status difference. Difference between the average proportion of higher caste women who received care and what the average proportion of Dalit women who received care would have been if their attributes had been evaluated using higher caste coefficients: $X^H\hat{\beta}^H - X^D\hat{\beta}^D$

Column 3: Ability difference. Difference between columns 1 and 2 (residual),

$$\{X^H\hat{\beta}^H - X^D\hat{\beta}^D\} - \{X^H\hat{\beta}^H - X^D\hat{\beta}^H\} = X^D\hat{\beta}^H - X^D\hat{\beta}^D$$

Column 4: Social status difference. Difference between what the average proportion of higher caste women who received care would have been if their attributes had been evaluated using Dalit coefficients and the average proportion of Dalit women who received care: $X^H\hat{\beta}^D - X^D\hat{\beta}^D$

Column 5: Coefficient difference. Difference between columns 1 and 4 (residual),

$$\{X^H\hat{\beta}^H - X^D\hat{\beta}^D\} - \{X^H\hat{\beta}^D - X^D\hat{\beta}^D\} = \{X^H\hat{\beta}^H - X^H\hat{\beta}^D\}$$

received prenatal treatment with higher caste women. The novelty of the paper was to separate the difference in outcomes between Dalit and higher caste women into two components, namely social status and social capability effect.

We found that a significant proportion of adverse health outcomes for Dalit women as compared to higher caste women were due to adverse risks—mortality-inducing factors in case of age at death and treatment-inducing factors in case of prenatal treatment. Nonetheless, differences in the ability to tackle mortality-inducing factors also played a significant role to explain Dalit women's

disadvantage. In case of age at death, reasons such as poor sanitation and water supply had more impact on Dalit women than on higher caste women. It is found through coefficient generated by regression equation that the higher caste coefficient explains 39 per cent of the social status effect while Dalit coefficient explains 78 per cent of the social status effect—Dalit women's life expectancy is lower as a result of higher exposure to mortality-inducing factors. Even in cases where the higher caste and Dalit women groups have similar mortality-inducing factors, Dalit women are found to have lower life expectancy. Accounting for the social status differences it is found that a gap of 5.48 years remains between the average ages at death of higher caste and Dalit women even after using higher caste coefficients for social status. Further, we have applied the levels of mortality-inducing factors catalogued for higher caste women and found that there is still a gap between the life expectancy for higher caste women and Dalit women. A difference of 11.07 years remains even after attributing Dalit social status coefficient to higher caste women which means that life expectancy among Dalit women would be 11 years lower than that of higher caste women inspite of having identical social status conditions (sanitation, drinking water, etc.). In case of receiving treatment, factors like poverty and illiteracy had more impact on Dalit women than on higher caste women. The regression analysis using Blinder-Oaxaca decomposition in this paper points towards evidence of discrimination as a factor which explains differences in life expectancy and access to health services between Dalit women and higher caste women. It is important to note that there may be many unobservable factors which affect health outcomes and given the limitations of the data, cannot be taken account of.

However, field-based primary studies provide evidence on discrimination faced by Scheduled Castes in access to labour market opportunities, public health services, food security and drinking water. Some of these discriminations faced by Scheduled Castes are as follows:

A. Discrimination in Rural Labour Market

Women from vulnerable groups face barriers and

difficulties while they seek employment in labour market due to their group identity. A micro level study (2005) of three villages in Haryana, Gujarat and Orissa undertaken by Indian Institute of Dalit Studies (Thorat, Mahamallik and Sadana, 2010) observed significant inter-social group differences in women's employment. Higher caste women managed to get much higher employment in non-farm sector compared to Scheduled Castes women. For instance, yearly employment varies from a minimum of 148 days for Scheduled Castes women to a very high level of 290 days for higher caste women. In the non-farm sector as well, there were differences in the level of employment between Scheduled Castes women and higher caste women. The study found that although all women suffered from lower level of participation in non-farm employment, but women from different groups did not suffer in the same degree. Women who belong to lower caste suffered more from lack of employment in non-farm sector as compared to women who belong to higher caste.

Evidence from pilot studies indicates that Dalit women face discrimination and exclusion from participation in certain categories of job because of their association with their occupation (manual scavenging). The notion of purity and pollution of occupations forbade women who belong to sweeper community from getting employment as a cook or maid as sweeping is perceived to be an unclean occupation.¹²

B. Discrimination in Access to Public Health Services

Sanghmitra (2010) provides evidence on discriminatory access to Scheduled Castes women and children to primary health services which in turn leads to lower utilisation of health services. She developed an index on one to five scale for the degree of discrimination and found that highest degree of discrimination was reported in the treatment during dispensing medicine followed by diagnostic visit to the doctor (Rajasthan) and conduct of pathological tests (Gujarat). On the other hand, consulting care providers for referral treatment was reported as the area of least discrimination in the scale of one to five.

The study indicated that access to information is

an area of discrimination as Dalits do not receive any information. This in turn influences their health seeking behaviour and health status. The study reported that health personnel discriminate Scheduled Castes by not visiting their habitations and families. When they do visit, they express discomfort and disrespect for the clients. Further, most healthcare camps are held in the dominant caste habitations and hence the use by Dalit communities is restricted. Responses from Scheduled Castes children, in the study, indicate that they would like the healthcare provider to speak gently using respectful words, consider them equals, spend adequate time and treat them based on the severity of illness as desirable behaviours.¹³ We provide the experience and insights from primary level studies conducted by All India Dalit Mahila Adhikar Manch (AIDMAM) and Indian Institute of Dalit Studies (IIDS) on caste-related discriminations faced by Dalit women and children in access to public health services.

Evidence based on a study conducted in 17 districts of Andhra Pradesh, Bihar, Tamil Nadu and Uttar Pradesh indicates discrimination faced by Dalit women in health services in government hospitals. Five hundred Dalit women were interviewed who

spoke about their experiences of discrimination in public sphere.

Panel 1 captures discrimination in spheres and treatment that Dalit women and their families received from doctors, nurses and village health nurses when they entered government hospitals or when they contacted medical staff outside the medical premises. This panel also provides consequences of discriminatory treatment in access to health services on Dalit women and their families. It is evident that Dalit women face discriminatory treatment in forms of rude verbal responses and refusal of medical treatment in public health services. This leads to their dependence on expensive private medical attention for which they have to take debt.

C. Discrimination in Access to Drinking Water

Dalit women also face caste-based discrimination in access to drinking water. The study in Gujarat conducted in 1971 is based on a survey of 69 villages. A repeat survey of these villages was done in 1996 to see changes in the practice of untouchability. The study looked into the practice of untouchability in seventeen spheres of village life which included the private and public domains. In 1971, 44 villages

Panel 1: Spheres and indicators of discrimination faced by Dalit women in public health services

Spheres of Discrimination	Identifiers of Discrimination	Consequences of Discrimination
Treatment at the time of antenatal check-up	Face rude verbal responses from health workers. Nurses give medicines without check-up and send them away.	Lack of care leads to requirement of private medical attention
Treatment by auxiliary nurse midwife (ANM) for family planning operations	Indifferent verbal responses and coerced to take decisions, e.g. prospect of ration card being withdrawn if refused to have tubectomy. Do not receive appropriate post operative care	Lack of post operative care leads to requirement of private medical attention
Treatment at the time of delivery	Ignored and kept waiting for long. The staff then directs to go to a distant district headquarter hospital for the delivery.	The delay complicates delivery which leads to requirement of private medical attention. Take loan for delivery in private hospital
Treatment after assault by men in authority (police and dominant caste landlord-employer)	Refusal of treatment by doctors in local government hospital in order to avoid being involved in a police case.	Lack of care leads to requirement of private medical attention

Source: Compiled by Nidhi Sadana Sabharwal drawing from various health studies undertaken by AIDMAM and IIDS

had separate water facility for Scheduled Castes near their localities. Two villages had been added to this list in twenty-five years. In these 46 villages, untouchability is not experienced in normal times. However, when water is scarce, Scheduled Castes experience difficulty and discrimination to fetch water from higher caste localities. In the remaining 23 villages where untouchables take water from the same water source as the higher caste, untouchability is practised in 61 per cent villages. In most such villages Scheduled Castes women take water after the higher caste women or their tap or position on the well is separately marked. In seven villages (11 per cent of the sample villages) Scheduled Castes women are not allowed to fetch water from the well. They have to wait till the higher caste women fill their pots. The higher caste women often shout at Scheduled Castes women and constantly humiliate them by saying, “Keep distance, do not pollute us!”

D. Discrimination in Access to Food Security

Dalits face discrimination in access to food from the public distribution system and mid-day meals. Empirical studies also show evidence of denial of access or access with differential treatment to food security programmes like Mid Day Meal Schemes and public distribution system. A study on Mid Day Meal Schemes for Rajasthan reported the exclusion of Scheduled Castes as cooks and helpers in almost 60 per cent sample villages (Dreze and Goyal, 2003).

Another study based on a sample of about 550 villages from five states namely Uttar Pradesh, Bihar, Andhra Pradesh, Tamil Nadu and Rajasthan also reported exclusion and discriminatory treatment in operation of Mid Day Meal Schemes and public distribution system (Thorat and Lee, 2010). The practise of discriminatory and exclusive behaviour towards Scheduled Castes remains widespread. Caste discrimination afflicts more than one-out-of-three fair price shops and more than one-out-of-three government schools which serve mid-day meals (averages for five states are 35.5 per cent and 37 per cent respectively). In terms of geographical spread, it is unquestionably a nationwide problem—from 24 per cent in Andhra Pradesh to 52 per cent in Rajasthan, to the vast majority in Uttar Pradesh and

Bihar—as respondents from villages in every state report problems of caste discrimination and exclusion in the Mid Day Meal Schemes. Likewise, with the public distribution system, no state is free of patterns of discrimination which ranges from 17 per cent in Andhra Pradesh to 86 per cent in Bihar.

Every state reports a substantial percentage of higher caste public distribution system dealers who practise caste-based discrimination in the distribution of goods such as favour to own caste consumers (preferential order of service by caste), hierarchically segregated timings for dominant caste and Dalit customers, less quantity of goods given to Dalits, higher price charged to Dalits and practice of ‘untouchability’ in the physical act of distribution of goods. While the problem is nationwide, the degree varies considerably from state to state. Where a higher percentage of Mid Day Meal Schemes cooks and organisers are Dalits, and where a higher percentage of mid-day meals are held in Dalit colonies, lower incidences of caste discrimination in mid-day meals are reported.

Discrimination in sources of livelihood reduces the return on assets and labour for affected groups which in turn aggravates poverty conditions for such groups. Thus, discrimination appears to be an additional pervasive factor which contributes to inequalities in health outcomes.

5. CONCLUSION AND POLICY RECOMMENDATIONS

Our analyses bring out two important features on morbidity and healthcare of women in India among different social groups. It shows that the average age at death for Dalit women (39.5 years) is 14.6 years less than the average age at death for higher caste women (54.1 years). The analysis establishes that Dalit women’s life expectancy is lower as a result of higher exposure to mortality-inducing factors. However, even in cases where the higher caste and Dalit women groups have similar mortality-inducing factors, Dalit women are found to have lower life expectancy. Even after we have accounted for the social status differences, it is found that a gap of 5.48 years remains between the average ages of death of higher caste women and Dalit women even after using higher caste coefficients for social status. Further, we have applied the levels of mortality-

inducing factors catalogued for higher caste women and found that there is still a gap between the life expectancy for higher caste women and Dalit women. A difference of 11.07 years remains even after attributing Dalit social status coefficient to higher caste women which means that life expectancy among Dalit women would be 11 years lower than that of higher caste women inspite of having identical social status conditions like sanitation and drinking water.

The analysis also shows that access to healthcare services is lower for Scheduled Castes women as compared to higher caste women. While 15 per cent higher caste women did not receive prenatal care, such care was not received by 26 per cent Dalit women. Similarly, as compared to 27 per cent higher caste women who did not receive post natal care, such care was not received by 37 per cent Dalit women. While establishing that economic position and level of women's education are closely linked with receiving both prenatal and post natal care it was evident that even after controlling for income, occupation, education, religion, age, place of residence (rural-urban) and state type (forward-backward) the social group to which women belonged had a significant effect on their probabilities to receive prenatal and post natal care. Compared to higher caste women (control group), Dalit women were less likely to receive prenatal and post natal care by 1.9 points and 3.3 points respectively.

Field-based studies provide evidence that Dalits have experienced caste-based discrimination in various markets—labour, input and consumer—as well as in their access to basic public services such as mid-day meals for school children and foodgrains through fair price shops. The failure of entitlements due to caste-based exclusion is significant. From the empirical evidence it becomes apparent that, among other reasons, caste-/untouchability-based exclusion and discrimination of the Scheduled Castes appear to be an additional reason which results in limited access to health services.

The above results have specific policy implications. General health polices need to be accompanied with group-specific measures to address the specific problems of discriminated social groups. Such general polices may include:

- ◆ Improvement in access of poor to income through assets and earnings
 - ◆ Improvement in education level
 - ◆ Improvement in access to sanitation facilities and drinking water
 - ◆ Improvement in access to public health services
- Additionally, Dalits should also be provided with safeguards against discrimination in health services. More specifically, these results show the need to adopt measures so as to promote equal and non-discriminatory access to healthcare services for women from socially excluded groups.

* * *

ENDNOTES

- 1 Epstein (1998) defined social bias in the following terms: "Wherever you stand on the social ladder, your chances of an earlier death are higher than it is for your betters."
- 2 Dalit women face sexual violence; and discrimination in access to legal redress, equal wages, and benefits from government programmes targeted at women's welfare.
- 3 Malik, Bela. 1999. 'Untouchability and Dalit Women's Oppression', *Economic and Political Weekly*, XXXIV(06): pp. 323–324.
- 4 For background on the NSSO, see Tendulkar (2007).
- 5 There are about 85 million Indians who are classified as the Scheduled Tribes. Of these, the *Adivasis* (which means 'original inhabitants') refer to those 70 million

- Indians who live in the heart of India in a relatively contiguous hill and forest belt which extends across the states of Maharashtra, Gujarat, Rajasthan, Madhya Pradesh, Chhattisgarh, Andhra Pradesh, Odisha, Jharkhand, Bihar and West Bengal (Guha, 2007).
- 6 Dalits refer to those 18 million Indians who belong to the Scheduled Castes. They are also broadly identified with the 'untouchable' castes. The untouchable castes are so called because the higher caste Hindus consider Dalits as polluting or unclean and, hence avoid any sorts of physical contact with them which also includes non-acceptance of food and water.
- 7 OBC: Those people who do not belong to the Scheduled Castes or Scheduled Tribes but belong to other economic and socially backward groups.
- 8 Forward caste Hindus are those who are not included

in the Dalit/ST/OBC categories. Since the designation of groups in the OBC category is a state responsibility, a particular (caste) group may be included in the OBC category in one state (i.e. be excluded from forward caste Hindus) but may be excluded from the OBC category in another state (i.e. be included in forward caste Hindus).

- 9 Agricultural or other labour for rural households and casual labour for urban households.
- 10 Forward states: The forward states include the following states and Union Territories, namely Andhra Pradesh, Chandigarh, Dadra and Nagar Haveli, Daman and Diu, Delhi, Goa, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala,

Maharashtra, Puducherry, Punjab, Tamil Nadu and West Bengal. The remaining states and Union Territories were classed as 'backward' states.

- 11 These estimates, which are not shown, can be obtained on request from the authors.
- 12 Shah G., H. Mander, S. Thorat, S. Deshpande and A. Baviskar. 2006. *Untouchability in Rural India*. New Delhi: Sage Publications.
- 13 Acharya, Sanghmitra S. 2010. 'Caste and Patterns of Discrimination in Rural Public Health Care Services', in Sukhadeo Thorat and Katherine S. Newman (eds), *Blocked by Caste: Economic Discrimination in Modern India*, New Delhi: Oxford University Press.

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