How much the Indigenous Women of Jharkhand, India are in Disadvantageous Condition: Finding's from India's National Family Health Survey

Praween Agrawal*

Abstract

Indigenous population are the most marginalised and vulnerable communities in India which constitutes 8.2 percent of India's total population, four times higher than the total population of Australia. The state of Jharkhand accounts for 27.7% of the total indigenous population of India. This paper compares the health and socioeconomic indicators among indigenous and non-indigenous women in Jharkhand in terms of 'disadvantage ratio' by exploring data of 1,614 ever-married women from NFHS–2. Study revealed a high disadvantageous situation of indigenous women in socio-demographic, fertility, family planning, and important aspect of health, nutrition, and health care indicators from non-indigenous women. Indigenous women of Jharkhand are not only backward from indigenous women of all India in different parameters, also they are disadvantageous from general women within the state itself. The finding calls for urgent implementation of special health care strategies for reducing health and socioeconomic-demographic disparities among the indigenous population of Jharkhand.

Key words: Indigenous women, healthcare, health, disadvantage ratio, Jharkhand, India

* *Author for Correspondence*: Author for correspondence: Praween K. Agrawal, Program Manager: Monitoring & Evaluation, India HIV/AIDS Alliance, Kushal House, Third Floor, 39 Nehru Place, New Delhi 110 019, India
Phone: +91-11-4163 3081 Ext. 134; Fax: +91-11-4163 3085
Email: pagrawal@allianceindia.org/ praweeniips@rediffmail.com

Introduction

India is a home to almost more than half of the world's tribal population. Over 84 million people belonging to 698 communities are identified as members of scheduled tribes[1], constituting 8.2% of the total Indian population[2] and is larger than that of any other country in the world. Through a constitutional mandate[1], formulated in 1950, scheduled tribes have been formally recognized as a distinct community in India. Consequently, there exist clear governmental policies for affirmative actions targeted towards scheduled tribes[3], and their members are routinely enumerated in national surveys[4] and censuses[2]. The proportion of individuals of scheduled tribes in the total Indian population has increased from 5.3% (1951) to 8.2% (2001) [1] since their formal recognition in 1950. Approximately more than 533 tribes were spread throughout different parts of India. [5] The concentration of scheduled tribes varies substantially between the Indian states[2] and is found predominantly high in a number of districts of the states such as Assam, Bihar, Madhya Pradesh, Maharashtra, Manipur, Orissa, Rajasthan, Sikkim, Tripura, Andaman & Nicobar Islands and Daman and Diu.[6] In the northeastern states, scheduled tribes constitute 65% or more of the total population; in Chattisgarh, Jharkhand, Orissa, Madhya Pradesh, Gujarat, and Rajasthan this proportion ranges between 13% and 32% of the population; and in other states, including Punjab, Haryana, Delhi, and Goa, the contribution of scheduled tribes to the total population is negligible[7]. The newly created state of Jharkhand also has a sizeable proportion of scheduled tribe population which is 27.7% according to 2001 Census. Also National Family Health Survey (NFHS-2, 1998-99) shows 29.1% Scheduled tribe women in the total sample population of Jharkhand.[8] In this study, the scheduled tribe category has been considered as being equivalent to indigenous within the Indian context.

The Constitution of India has recognized certain ethnic groups and named them as scheduled tribes. Notwithstanding the challenges of defining indigenous populations[9], including those specific to India[10,1], the group classified by the Indian government as "scheduled tribes" has often been categorized as being indigenous[11,12]. Scheduled tribes are mainly the indigenous population in India that the Government of India identifies as socially and economically backward and in need of special protection from social injustice and exploitation.[5] The Government of India identifies communities as scheduled tribes based on a community's "primitive traits, distinctive culture, shyness with the public at large, geographical isolation and social and economic backwardness" [1], with substantial variations in each of these dimensions with respect to different scheduled tribe communities[13].

The Indigenous societies in India are undisputedly considered as the weakest sections of the population in view of common socio-economic and socio-demographic factors like poverty, illiteracy, lack of developmental facilities, lack of adequate primary health facilities etc[14, 15] . Despite the protection given to the indigenous population by the constitution of India in 1950, Scheduled Tribes remains the most backward and ethnic group in India. They are backward not only in comparison to the general population, but also compared to Schedule Caste and Other Backward Class also. In fact, the conditions of tribes or indigenous population in the post-independence India has, in many ways worsened. [14] Indigenous women are malnourished [16, 17] and their dietary energy intake is not adequate to compensate their heavy physical work load [18]. Although several studies on maternal nutritional status have been carried out in India among general population, [16, 19]

but there is a dearth of information pertaining to the nutritional status and health status among women in indigenous population.
It is a striking feature that though the indigenous women in India suffer from high levels of female morbidity and mortality, they do not seek generally medical facilities from health centres.[3] They simply neglect the serious health problems like, RTIs/STDs, menstrual disorders and unwanted pregnancies primarily due to lack of awareness and generally due to lack of accessibility to health facilities proper information and guidance. The extent of knowledge and practice of family planning was also found to be also low among the Scheduled Tribes[20].

On the above context this study focuses on the differentials existing in various health and nutritional parameters of indigenous women and non-indigenous women in the newly formed state of Jharkhand and all India with reference to:

- Differential in different socio-demographic characteristics, reproductive health parameters and nutritional status.
- Examine and compare the disadvantageous condition of indigenous women in different socio-demographic, health and nutritional parameters.

Data
Data for the present study has been extracted from the National Family Health Survey (NFHS-2), conducted during 1998-99. This survey was designed on the lines of the Demographic and Health Surveys (DHS) that have been conducted in many developing countries since the 1980s. NFHS-2 collected demographic, socioeconomic, and health information from a nationally representative probability sample of 90,303 ever-married women age 15–49 residing in 92,486 households. All states of India are represented in the sample (except the small Union Territories), covering more than 99 percent of country's population. The sample is a multi-stage cluster sample with an overall response rate of 98 percent. Details of sample design, including sampling frame and sample implementation, are provided in the basic survey report for all India.[21] NFHS-2 provides information on women's fertility, family planning, and important aspects of health, nutrition, and health care. For this study, the raw as well as published data from NFHS-2 for the state of Jharkhand as well as all India has been utilized. For the state of Jharkhand, NFHS-2 has collected data of a representative probability sample of 1,614 evermarried women age 15-49 years residing in 1,642 households.[8] The analysis here focuses on a representative sample of 1,614 ever-married women comprising of 469 indigenous women and 1,145 non-indigenous women and 90,303 ever-married women from all India.

Methods
To examine and compare the disadvantageous condition of indigenous women in Jharkhand with all India and among the non indigenous women in the state itself, a disadvantage ratio has been calculated by dividing the indigenous women with non-indigenous women in terms of different indicators as described below:

Disadvantage ratio for any indicator = percentage of indigenous women in that indicator/percentage of non-indigenous women in the same indicator * 100

For calculating disadvantage ratio for any indicator, it has been taken into consideration that higher the ratio value of that indicator means poorer condition. For example, instead of taking full ANC, no ANC has been taken into consideration for the analysis. Similarly,

instead of taking percent literate, percent illiterate have been taken and like wise for other indicators also. If the disadvantage ratio is less than 100, then it represents the better condition of indigenous women than non-indigenous women. If ratio value is exactly 100 then it shows similar situation of indigenous women and non-indigenous women. If the ratio value is more than 100, then it shows poorer situation of indigenous women than non-indigenous women. Besides disadvantage ratio, simple bi-variate analysis has been done and the results has been shown in percentage for different health and nutrition attributes.

The study population and environment

The term 'Jharkhand' means a forest country. The state of Jharkhand was curved out from the state of Bihar on November 15, 2000. This region lies in the southern part of Bihar embracing Santhal Parganas and Chhotanagpur. The state comprises of 18 districts. It is a plateau state which rises about 3,000 feet above sea level. There are 30 indigenous and sub indigenous group in the Jharkhand region. The major indigenous groups are Santhals, Oraons, Mundas, Kharias, Hos, Cheros, Kherwars, Korwas, Bihores etc. Major dialects in the State are Santhali, Kurukh, Mundari, Kharia, Ho, Sadri, Chotanagpuri etc.[5] Table 1 provides information on some important demographic indicators of Jharkhand all women as compared to India all women as well as indigenous women from the most recently conducted National Family Health Survey, 2005-06.

<Table 1 and Map 1 and 2 about here>

Human subjects informed consent

The analysis presented in this study is based on secondary analysis of existing survey data, with all identifying information removed. The survey obtained informed consent from each respondent before asking questions.

Results

Socio-economic and demographic characteristics of the indigenous and non-indigenous women of Jharkhand

The percentage distribution of indigenous and non-indigenous ever married women age 15–49 years by different socio-economic and demographic attributes like age, types of place of residence, education, husband's education, standard of living, and exposure to mass media is presented in Table 2. About 10% indigenous women are in age group 15–19 years compared to 7% among non-indigenous women. 89% of indigenous women are illiterate compared to 46% among non-indigenous women. Only 3% indigenous women have completed high school and above education compared to 21% non-indigenous women. Not only indigenous women are illiterate themselves, but their husband's educational status is also very much poor. 62 % of indigenous women's husbands are illiterate compared to 23 % among non-indigenous women. 88% indigenous women have not been exposed to any media compared to 44% among non-indigenous women. Standard of living index (SLI), which has been calculated with the help of availability of amenities, represents a proxy variable of economic status of the household. About 30% of general woman belongs to a high standard of living compared to only 1% of indigenous women. Majority of indigenous women (more than 75%) belongs to a low standard of living compared to only 33% of non-indigenous women. Majority of the indigenous as well as the non-indigenous women belongs to the Hindu religion. However, the minority among general population is Muslims whereas among indigenous population, minority group represents by other religion dominated by the Christians. Hindi is found as the language

spoken by 87% of non-indigenous women as well as 83% of indigenous women. After Hindi, Bengali or Oriya language is spoken by 13% of general woman whereas 11% indigenous woman speaks other languages, which is, distinguished by indigenous languages.

<Table 2 about here>

Employment characteristics of indigenous and non-indigenous women in Jharkhand

Table 3 represents the percentage distribution of indigenous and general ever-married women aged 15–49 years by employment characteristics. Indigenous women are found more in working condition (41%) than non-indigenous women (13%). On the other hand more than 85% of non-indigenous women are not working compared to 54% of indigenous women in the past 12 months of the survey. Indigenous women are found working more in family farm/business (41%) than non-indigenous women (27%). However, less proportion of indigenous women are self-employed than non-indigenous women. Looking at the continuity of employment, again, less proportion of indigenous women (43%) are in regular employment through out the year than non-indigenous women (50%) and also seasonal employment is more among indigenous women (52%) than non-indigenous women (44%).

Occupational structure shows that, majority of indigenous women (54%) are engaged as agricultural workers. Only 2.4% of indigenous women are working in professional or technical jobs compared to 18% among non-indigenous women. Again a higher proportion of indigenous women are engaged in clerical or sales jobs than non-indigenous women. Husband's occupation also shows worse picture for indigenous women. A large proportion of indigenous women's husbands are agricultural workers (62%) compared to only 20% of non-indigenous women's husband. Also in professional or technical work, indigenous women's husbands are far behind that of non-indigenous women's husband.

<Table 3 about here>

Differential in Socio-demographic and fertility and family planning situation among indigenous women in Jharkhand and all India

Table 4 represents the percentage distribution of indigenous and general ever married women aged 15–49 years by selected socio-demographic indicators, such as literacy, mass media exposure, total fertility rate, birth order, desire for additional children and current contraceptive usage for Jharkhand and all India for the year 1998-99. Indigenous women of Jharkhand are very much poor in literacy than all India indigenous women. 89% of indigenous women of Jharkhand are illiterate compared to 79% of all India. Similarly, illiteracy among non-indigenous women of Jharkhand is also little higher than all India non-indigenous women i.e. 46% and 44%, respectively. In case of exposure to mass media, again, Jharkhand indigenous women are less exposed than all India indigenous women. 88% of indigenous women of Jharkhand are not exposed to any media compared to 62% for all India indigenous women. Also there is wide gap between non-indigenous women of Jharkhand and India regarding mass media exposure.

However, Total Fertility Rate (TFR) for both the group is less in Jharkhand than all India. It is 2.3 among indigenous women of Jharkhand against 3.06 for all India indigenous women. Again, TFR is 2.62 among non-indigenous women of Jharkhand against 2.66 for all India non-indigenous women. On the other hand, birth order 3 and above is slightly higher among Jharkhand indigenous women (20%) than all India indigenous women

(19%). However, birth order 3 and above is lower in non-indigenous women of Jharkhand than non-indigenous women of all India, which is 16% and 17%, respectively.

Contrary to TFR, desire to have more children with three living children is much higher among indigenous women of Jharkhand (38%) than indigenous women of all India (25 %). However, desire to have more children with three living children is lower among non-indigenous women of Jharkhand (8%) than non-indigenous women of all India (13%). Also looking at the contraceptive use it has been found that, 84 % of indigenous women of Jharkhand are currently not using any contraceptive methods compared to 61% of indigenous women of all India. Contraceptive use is also less among non-indigenous women of Jharkhand than all India.

<Table 4 about here>

Maternal, reproductive health situation and HIV/AIDS knowledge among indigenous women in Jharkhand and all India

Table 5 represents the percentage distribution of indigenous and general ever-married women aged 15–49 years by selected maternal health care indicators like ANC, tetanus toxoide injection, IFA tablets consumption and delivery characteristics, reproductive health problems like urinary tracts infections (UTIs) and any reproductive health problem and knowledge about HIV/AIDS for Jharkhand and all India.

Maternal health situation for both indigenous and non-indigenous women is much poor in Jharkhand than all India. 74% indigenous women of Jharkhand have not taken any ANC compared to 43% of all India indigenous women. Similarly, 37% of non-indigenous women of Jharkhand have not taken ANC compared to 28% of non-indigenous women of all India. Again, a similar situation is found regarding not intake of tetanus toxoid injection and IFA tablets among both the groups in Jharkhand and all India. 94% indigenous women in Jharkhand had a home delivery compared to 82% among all India indigenous women. Similarly, 69% of non-indigenous women of Jharkhand had a home delivery compared to 59% of non-indigenous women of all India.

Reproductive health situation for both indigenous and non-indigenous women is poorer in Jharkhand than all India. 28% of indigenous women of Jharkhand are having urinary tract infections (UTIs) compared to 20 % in all India indigenous women. Non-indigenous women of Jharkhand are also having more urinary tracts infections (UTIs) compared to all India indigenous women i.e. 25% and 17%, respectively. Any reproductive health problem is found almost similar in Jharkhand and all India for both the groups, which is between 40 to 43%.

NFHS-2 included a set of questions on knowledge of AIDS and AIDS prevention. Ever-married women aged 15–49 years were first asked if they had ever heard of an illness called AIDS. 95% indigenous women of Jharkhand reported that they have not heard about AIDS compared to 83% all India indigenous women. Similarly, 65% non-indigenous women of Jharkhand have not heard about AIDS compared to 52% non-indigenous women of all India. Again, among women who had heard about AIDS, knowledge of the ways to avoid AIDS is less in both the groups of Jharkhand women than all India women. 85% Jharkhand indigenous women knows no ways to avoid AIDS compared to 45% all India indigenous women. Similarly, 66% non-indigenous women of Jharkhand knows no ways to avoid AIDS compared to 34% all India non-indigenous women.

<Table 5 about here>

Nutritional and anemia status of indigenous women in Jharkhand and all India

Table 6 represents the percentage distribution of indigenous and general ever-married women aged 15–49 years according to their use of iodized salt, consumption of specific food items at least once in a week, and underweight and anemic condition for Jharkhand and all India. 21% of indigenous women of Jharkhand use non-iodized salt whereas 34% of all India tribes use non-iodized salts. Similarly, 15% of non-indigenous women of Jharkhand use non-iodized salt compared to 21% of all India's non-indigenous women. But, when considering the salt iodized limit up to 30 ppm (parts per million), which is a standard composition, it is found that, 77% of indigenous women of Jharkhand do not use iodized salt up to 30 ppm compared to 75% indigenous women of all India. However same proportion of non-indigenous women (56%) of Jharkhand as well as all India do not use iodized salt up to 30 ppm. This reveals the vulnerability towards Iodine deficiency disease among the indigenous women of Jharkhand.

Specific food intake has been seen in terms of consumption of milk or curd, pulse or beans, green leafy vegetables, fruits, eggs and chicken/meat/fish on weekly basis among Jharkhand and all India women for both the groups. 81% indigenous women of Jharkhand do not consume milk or curd at least once in a week compared to 66% indigenous women of all India. Similarly, 45% non-indigenous women of Jharkhand do not consume milk compared to 38% non-indigenous women of all India. In the similar facshion, 86% indigenous women of Jharkhand do not consume chicken, meat or fish compared to 74% indigenous women of all India. In consumption pattern of pulses or beans, fruits and eggs also, indigenous women of Jharkhand is behind all India indigenous women. Also, less proportion of non-indigenous women of Jharkhand consumes fruits, eggs and chicken, meat or fish than all India non-indigenous women. Only green leafy vegetables are being consumed by a higher proportion of indigenous as well as non-indigenous women of Jharkhand than all India. 86% indigenous women in Jharkhand are anemic compared to 65% of all India indigenous women. Also, 60% non-indigenous women in Jharkhand are anemic compared to 48% of all India non-indigenous women. 41% indigenous women of Jharkhand and 46 % of all India indigenous women are underweight. Also 31% of non-indigenous women of both places are underweight.

<Table 6 about here>

Disadvantageous condition of indigenous women in Jharkhand and all India

(I) Socio-demographic disadvantage

Table 7 represents the disadvantage ratio for indigenous ever-married women aged 15–49 years for some socio-demographic indicators like literacy, exposure to mass media, total fertility rate, birth order, desire for additional children and current contraceptive use in Jharkhand and all India.

The disadvantage ratio for literacy among the indigenous women of Jharkhand is higher than all India i.e. 193 and 180 respectively. However, fertility situation is found better in Jharkhand indigenous women and ratio is 88, even below 100 compared to all India, which is 115. However, disadvantage ratio for birth order 3+ shows a significant disfavour for Jharkhand indigenous women than all India i.e. 126 and 108, respectively. Again, in case of desire to have more children with three living children, the ratio is closer to 500 for Jharkhand than 193 for all India, which shows the magnitude for the desire for more children among indigenous women of Jharkhand. For contraceptive use also, Jharkhand

indigenous women is behind all India indigenous women, as the disadvantage ratio were 150 and 131 respectively.

<Table 7 about here>

(ii) Disadvantage in Maternal and reproductive health and knowledge of HIV/AIDS

Table 8 represents the disadvantage ratio for indigenous ever-married women aged 15–49 years for some selected maternal, reproductive health and knowledge of HIV/AIDS in Jharkhand and all India. All the indicators related to maternal health are also not in favor of Jharkhand indigenous women. For antenatal check-ups, disadvantage ratio for Jharkhand indigenous women is 198 against 154 all India indigenous women. This reveals that Jharkhand indigenous women are 98 % less likely to avail ANC than non-indigenous women whereas, all India indigenous women are 54 % less likely than all India non-indigenous women in respect of not taking ANC. In case of tetanus toxoid injection during pregnancy, disadvantage ratio for Jharkhand indigenous women is 180 compared to 202 for all India indigenous women. Similarly, in case of taking IFA tablets during pregnancy, disadvantage ratio for Jharkhand indigenous women is 161 compared to 139 for all India indigenous women. Disadvantage ratio for delivery at home shows almost similar situation among Jharkhand and all India indigenous women, which is 136 and 139, respectively.

There is not significant difference in disadvantage ratio of any reproductive health problem of Jharkhand and all India indigenous women except for urinary tract infection, which was less in Jharkhand than all India i.e. 111 and 120, respectively.

There is also a significant difference found in the disadvantage ratio of women who had not heard about AIDS between Jharkhand and all India indigenous women. This ratio for Jharkhand is 146, which is lower from all India where it is 160. Disadvantage ratio for knowing no ways to avoid AIDS is almost similar in Jharkhand and all India, which is 129 and 133 respectively.

<Table 8 about here>

(iii) Disadvantage condition in Nutritional status and anemia prevalence

Table 9 represents the disadvantage ratio for indigenous ever married women aged 15–49 years for the use of iodized salt, specific food consumption at least once in a week, BMI and anemic condition for Jharkhand and all India. Disadvantage ratio for salt not iodized at all is 138 for Jharkhand and 164 for all India, which shows that 38% more among indigenous women than non-indigenous women in Jharkhand are using uniodized salt. But for all India, the disadvantage ratio for salt not iodized at all is 164. However, when iodization of salt up to 30 ppm was considered, disadvantage ratio for Jharkhand indigenous women is found little more than all India indigenous women, which is 137 and 134, respectively. This shows that in Jharkhand, although iodization of salt is more than all India, but proper iodization is not adequate and even it is less than all India.

Regarding consumption of specific food items, Jharkhand indigenous women show more disadvantageous condition compared to all India indigenous women. Disadvantage ratio regarding not consuming milk or curd at least once in a week by indigenous women is 180 for Jharkhand and 173 for all India. Regarding consumption of pulses or beans and green leafy vegetables, disadvantages ratio for Jharkhand indigenous women reaches to 282 and 200 respectively, which shows the deprived nutritional condition of indigenous women in Jharkhand. However, the disadvantage ratio regarding not consuming fruits, eggs and chicken, meat or fish are not much high.

The effect of nutritional deficiency is quite visible on the anemic condition of women. Disadvantage ratio for anemia in Jharkhand and India is 143 and 136, respectively. Also, disadvantage ratio for underweight (BMI <18.5 kg/m^2) among Jharkhand indigenous women is 132 compared to 152 among all India indigenous women. This shows that there is a serious nutritional problem particularly among indigenous women of Jharkhand and all India.

<Table 9 about here>

Discussion

Indigenous people are amongst the poorest and most marginalized population groups experiencing extreme levels of health deprivation[22]. Notably, the health and economic disparities between indigenous and non-indigenous populations are universal[23, 24]. Improving indigenous people's health especially women's health as well as eliminating the indigenous/non-indigenous health divide requires addressing the knowledge gap related to understanding the patterns of indigenous health deprivation[23]. Though there are few systematic accounts of the health of indigenous peoples in developing countries[25, 26], intensive research on, indigenous health in India remains inadequate[23]. In this perspective, this study examined the disadvantage condition of the indigenous women in the newly developed state of Jharkhand, India in terms of socio-economic, demographic and health indicators.

Age-structure show different patterns for indigenous and non-indigenous women. Indigenous women are more in younger cohort than non-indigenous women which shows a relatively high prevalence of low age at marriage among indigenous women. A huge gap has been noticed in educational attainment between indigenous and non-indigenous women in Jharkhand. Educational level of high school and above also shows more than eight fold gap between both the groups. Mass media, which plays an important role in development and utilization of services, in this key indicator also indigenous women are very less exposed. Also, there is a huge gap in economic status between indigenous and non-indigenous women. A vast differential regarding professional or technical service has also been seen. Indigenous women are more in working status but in terms of continuity of work as well as occupational structure, they are much deprived than non-indigenous women. Also their husband's occupation is in many ways worst than the occupation of non-indigenous women's husband.

Our finding shows that despite having low TFR among indigenous women of Jharkhand, desire for children as well as percentage of children in the higher birth order is more and contraceptive usage is low. Therefore the lower TFR may not be because of desire fertility behaviour, but may be due to some other factors such as prevalence of infertility among tribal women. [27] Also each and every maternal and reproductive health indicators are not only worse in case of indigenous women but also for the non-indigenous women of Jharkhand compared to all Indian indigenous and non-indigenous women.

Poor pattern of consumption of all the specific food items except green leafy vegetables has been observed among indigenous and non-indigenous women of Jharkhand than all India indigenous and non-indigenous women. The effect of nutritional deficiency is visible on the women's health. Prevalence of anemia has been found more in both the groups women of Jharkhand than national level. Indigenous as well as non-indigenous women of Jharkhand and all India are also found to be underweight (BMI < 18.5 kg/m^2).

The study has two major findings related to patterns of health and nutritional disadvantage among indigenous women in Jharkhand and India. First, there are substantial demographic and health care disadvantage between indigenous and non-indigenous peoples, with all disadvantage ratio values being inexplicably greater for indigenous women. The disadvantage in distribution of demographic, maternal and child health care factors as well as socioeconomic status in indigenous and non-indigenous women accounts for a substantial segment of the health disadvantage between these two groups.

Other important finding of this study is that there are substantial heterogeneities in all the sociodemographic and healthparameters between indigenous women of Jharkhand and all India. Differential educational attainment and standard of living are major producers of health-related heterogeneities even within indigenous populations[7]. This finding reiterates the importance of social and economic well-being in creating health differences within indigenous groups, as well as between indigenous women and general women. Whilst, in general, the socioeconomic differentials within indigenous groups are smaller than those observed in non-indigenous groups they are still substantial. The presence of such differentials draws attention to the need to consider such heterogeneities within population groups that are seen as having less favorable socioeconomic and health experiences.

The definition of indigenous peoples put forward by the International Labor Organization in Convention 169, as well as the recently revised World Bank Policy on indigenous people, supports the application of the term "indigenous" to the scheduled tribes in India[11, 12]. The Government of India has however resisted the use of the term 'indigenous' when referring to the scheduled tribes on the grounds that it is a practical impossibility to decide indigeneity after centuries of "migration, absorption, and differentiation" [1]. Notwithstanding the identification challenges related to "who is indigenous," the scheduled tribes in India approximately fit the definition[7] by Maybury-Lewis who states, "Indigenous peoples are defined as much by their relations with the state as by an intrinsic characteristic that they may possess. They are often considered to be tribal people in the sense that they belong to small-scale pre-industrial societies that live in comparative isolation and manage their own affairs without the centralized authority of a state ." [9]. In this study we have used the term indigenous population interchangeably with scheduled tribe populations of India as we feel that the historical and contemporary forces that lead to adverse socioeconomic and health consequences for indigenous populations in other parts of the world [22-24, 28-30] truly apply to the scheduled tribes population in India [7].

Conclusion and Policy Implications

Our study clearly brings out the differential among the indigenous women and non-indigenous women in Jharkhand in different socio economic demographic and health parameters. Maternal and child health care is an important aspect of health seeking behavior, which is largely neglected among the indigenous population groups. Also malnutrition is pervasive with high prevalence of anemia among the indigenous women in Jharkhand. The utilization of maternal health care is also very less among the indigenous women than non-indigenous women in Jharkhand. Use of modern methods of contraception is also significantly less among the indigenous women than the non-indigenous women. All these will likely to have not only an adverse long-term impact on their own health and well being but also on their children. Our study shows that the indigenous women of Jharkhand are in a vulnerable condition. They are not only backward from the indigenous women of all India in various aspects, but also there is a broad difference from the non-indigenous women within the state itself. The disadvantage

ratios for almost all indicators are unfavorable for Jharkhand as well as all India indigenous women. For some indicators disadvantage ratio approaches to 200 points for e.g. no ANC, not exposure to mass media and not consuming green, leafy vegetables at least once in a week. Again, disadvantage ratio for literacy and not consuming pulse or beans at least once in a week crosses 250 point in Jharkhand.

In India, the National Health Services have often neglected the indigenous people in general and indigenous women in particular.[17] In 1982, with the establishment of the National Health Policy, the Indian government declared the need to improve the health status and quality of life of the underprivileged groups. But programs to improve the health status and quality of life of underprivileged groups cannot succeed unless they form part of a larger effort to bring about and overall transformation of society. [31] The interventions for improving the health status of women under the Government of India's Child Survival and Safe Motherhood Program, has not significantly able to improve the services for women specially in the indigenous areas of Jharkhand.

To achieve a holistic development, attention should be given more towards the health of the indigenous women in a realistic manner because the health of the women will play an important role in shaping up the future population scenario of the state as well as the nation. Focus should be given specifically for better nutritional status of indigenous women in particular. There is an urgent need for the educational empowerment of the indigenous women in Jharkhand. The 'Information Education and Communication' as well as 'Awareness Behavioural Change' activity should reach to all indigenous women for enhancement of knowledge of AIDS and to utilize more health care services. In order to improve the health status of the indigenous women in Jharkhand, the health care delivery system should be designed effectively to cater to the specific needs of the indigenous women during pregnancy and at childbirth by ensuring their personal involvement. The planners have to take into consideration the lifestyle, belief, cultural milieu, social organization and the channels of communication of the indigenous people before introducing developmental activities. Health interventions must focus on indigenous culture, medical training of the indigenous people, and a knowledgeable health care delivery system catering to the needs of indigenous women and the child.

In conclusion we can say that while there are critical issues related to political and social marginalization that are central to improving the health and wealth of indigenous populations in absolute terms, our findings suggest that a focused approach to addressing inequalities in social and economic well-being within and between the indigenous and non-indigenous populations would contribute to reducing health inequalities in a general fashion. An effective application of such approaches is likely to lead to decreasing relevance of the indigenous aspect of the experience of scheduled tribe populations, in line with the stated objectives of the Government of India.

Limitations of the study

Although rigorous methods were employed to maintain the data quality of NFHS-2, some limitations are inherent to a cross-sectional survey of this type, which involves reporting of past behaviors. Also what has been reported in this study as the contribution of socioeconomic status in perpetuating the indigenous/non-indigenous health divide and the extent of socioeconomic inequalities in health within indigenous groups are likely to be underestimates of the true contribution of socioeconomic circumstances to explaining health differentials between and within population groups[32]. It is, however, possible that

the socioeconomic measures considered in this study may not have the same meaning within indigenous and non-indigenous peoples, leading to inadequate control for this determinant of health differences between the population groups[33].

References

1) India Ministry of Tribal Affairs (2004) The national tribal policy (draft) New Delhi: India Ministry of Tribal Affairs. Available:http://tribal.nic.in/finalContent.pdf.

2) Office of the Registrar General and Census Commissioner ((2001) Total population, population of scheduled castes and scheduled tribes and their proportions to the total population New Delhi: Office of the Registrar General and Census Commissioner.

3) Government of India (1950) Constitution of India. Part XVI. Special provisions relating to certain classes New Delhi: Government of India.

4) International Institute of Population Sciences (2000) National Family Health Survey 1998–99 Mumbai: International Institute of Population Sciences.

5) Census of India. Primary Census Abstract, Office of the Registrar General of India, New Delhi. 2001.

6) Registrar General and Census Commissioner of India. Census of India 2001. (Online) Available: www.censusindia.net.

7) Subramanian SV, Smith GD, Subramanyam M (2006) Indigenous Health and Socioeconomic Status in India. PLoS Med 3(10): e421 oi:10.1371/ journal.pmed.0030421: Accessed on 9/9/2008

8) International Institute for Population Sciences (IIPS), ORC Macro. 2002. National Family Health Survey (NFHS-2), 1998-99: Jharkhand. Mumbai, IIPS

9) Maybury-Lewis D (2002) Indigenous peoples, ethnic groups and the state, 2nd edition Boston: Allyn and Bacon. 146. p.

10) Karlsson BG (2003) Anthropology and the 'indigenous slot': Claims to and debates about indigenous peoples' status in India. Crit Anthropol 23: 403–423.

11) United Nations (2004) The concept of indigenous peoples New York: United Nations. Available: http://www.un.org/esa/socdev/unpfii/documents/ PFII%202004%20WS.1%203%20Definition.doc.

12) World Bank (2005) 7 Indigenous peoples. OP 4.10 Washington (D. C.): World Bank. Available: http://wbln0018.worldbank.org/Institutional/Manuals/OpManual.nsf/tocall/ 0F7D6F3F04DD70398525672C007D08ED.

13) Basu S (2000) Dimensions of tribal health in India. Health Popul Perspect Issues 23: 61–70. Find this article online

14) Basu, S.K. A health profile of Tribal India. Health For The Millions. 1994 (2):12-4.

15) Thakur D.S., Thakur D.C., Saini A.S. Socio-economic impact of tribal development programmes in Himachal Pradesh. Journal of Rural Development 1991 **10**: 823-830.

16) Samuel L.K., Rao P.S.S. Socio-economic differentials in mothers at risk based on pre-pregnancy weights and heights. Indian Journal of Medical Research 1992 **96**: 159-167.

17) Maiti, S., Unisa, S., Agrawal K. P. Health care and Health among Tribal women in Jharkhand: A Situational Analysis. Studies of Tribes and Indigenouss 2005 **3**(1): 37-46.

18) Chatterjee M., Lambert J. Women and Nutrition: Reflections from India and Pakistan. ACC/SCN Symposium Report. Nutrition Policy discussion Paper No. 6, pp. 73-108, Geneva, Administrative committee on coordination / Subcommittee on nutrition. 1990.

19) Tripathi A.M., Agarwal D.K., Agarwal K.N., Devi R.R., Chetian S. Nutritional status of rural pregnant women and fetal outcome. Indian. Pediatrics 1987 **24**: 703-712.

20) Kanitkar T and R. K. Sinha. A Report on Demographic Study of Tribal Population in Santhal Pargana in Bihar and Phulbani and Kalahandi Districts in Orissa. Mumbai: International Institute for Population Sciences, India, 46p. 1988.

21) International Institute for Population Sciences (IIPS), ORC Macro. National Family Health Survey (NFHS-2), 1998-99: India. Mumbai, IIPS. 2000

22) Willis R, Stephens C, Nettleton C (2004) The right to health of indigenous peoples. Report of a conference held at the London School of Hygiene and Tropical Medicine London: Health Unlimited.

23) Stephens C, Nettleton C, Porter J, Willis R, Clark S (2005) Indigenous peoples' health—Why are they behind everyone, everywhere? Lancet 366: 10–13. Find this article online

24) Bristow F, Stephens C, Nettleton C, W'achil U (2003) Utz' Wach'il: Health and well being among indigenous peoples London: Health Unlimited/London School of Hygiene and Tropical Medicine. Available: http://www.lshtm.ac.uk/pehru/indig/utzpamphlet.pdf.

25) Seale JP, Shellenberger S, Rodriguez C, Seale JD, Alvarado M (2002) Alcohol use and cultural change in an indigenous population: A case study from Venezuela. Alcohol Alcohol 37: 603–608.

26) Escobar AL, Coimbra CEJ, Camacho LA, Portela MC (2001) Tuberculosis among indigenous populations in Rondonia, Amazonia, Brazil. Cad Saude Publica 17: 285–298.

27) Ram, U. Unwanted Pregnancies/Births Among Tribal and Muslim of Maharashtra. Demography India 2001 **30** (2): 281-298.

28) Hetzel DM (2001) Death, disease and diversity in Australia, 1951 to 2000. Med J Aust 174: 21–24.

29) Bramley D, Hebert P, Tuzzio L, Chassin M (2005) Disparities in indigenous health: A cross-country comparison between New Zealand and the United States. Am J Public Health 95: 844–850.

30) Wilson K, Rosenberg MW (2002) Exploring the determinants of health for First Nations peoples in Canada: Can existing frameworks accommodate traditional activities? Soc Sci Med 55: 2017–2031.

31) Basu, S. Health and Culture among the underprivileged groups. Health For The Millions 1992 **18**(1-2): 23-4.

32) Gakidou E, Hogan M, Lopez AD (2004) Adult mortality: Time for a reappraisal. Int J Epidemiol 33: 710–717.

33) Davey Smith G (2000) Learning to live with complexity: Ethnicity, socioeconomic position, and health in Britain and the United States. Am J Public Health 90: 1694–1698.

Table 1: Selected demographic indicators for Jharkhand All women, India All women and Scheduled Tribe women

Demographic indicators	Jharkhand All women	India	
		All women	Scheduled Tribe women
Marriage and fertility			
Women age 20-24 married by age 18 (%)	61.2	44.5	55.0
Total Fertility Rate (TFR)	3.31	2.68	3.12
Median age at first birth for women age 25-49	18.9	19.8	19.1
Married women with 2 living children wanting no more children (%)	64.3	83.2	74.3
Family Planning (currently married women age 15-49)			
Currently using any method (%)	35.7	56.3	48.0
Currently using any modern method (%)	31.1	48.5	42.7
Female sterilization (%)	23.4	37.3	35.3
Condom (%)	2.8	5.3	1.7
Total unmet need (%)	23.7	12.8	13.9
Maternal health			
Mothers who had at least 3 antenatal care visits for their last birth (%)	36.1	50.7	40.2
Mothers who consumed IFA for 90 days or more when they were pregnant with their last child (%)	14.6	22.3	17.3
Births assisted by a doctor/nurse/LHV/ANM/other health professional (%)	28.7	48.3	26.9
Institutional births (%)	19.2	40.7	19.6
Mothers who received postnatal care from a doctor/nurse/LHV/ANM/other health professional within 2 days of delivery fro their last birth (%)	17.0	36.4	22.1
Nutritional status			
Women whose Body Mass Index is below normal (%)	42.6	33.0	46.6
Ever-married women age 15-49 who are anemic (%)	70.4	56.2	69.2
Knowledge of HIV/AIDS			
Women who have heard of AIDS (%)	28.9	57.0	34.6
Women who know that consistent condom use can reduce the chances of getting HIV/AIDS (%)	21.8	34.7	17.2

Source: National Family Health Survey-3, 2005-2006

Table 2: Percentage distribution of indigenous and non-indigenous ever-married women by selected socio-economic and demographic characteristics, Jharkhand, NFHS-2, 1998-99

Socio-economic and demographic characteristics	Indigenous women	Non-indigenous women
Age groups		
15-19	10.2	6.6
20-24	17.7	17.5
25-29	24.2	14.8
30-34	19.0	21.4
35-39	13.2	16.2
40-44	9.1	14.0
45-49	6.7	9.6
Type of place of residence		
Urban	2.6	37.1
Rural	97.4	62.9
Educational attainment		
Illiterate	89.2	45.9
Literate, < middle school complete	5.6	22.3
Middle school complete	2.6	10.9
High school complete and above	2.6	21.0
Husband's education		
Illiterate	61.8	22.7
Literate, <middle school complete	17.5	11.8
Middle school complete	9.1	11.8
High school complete and above	11.7	53.7
Not regularly exposed to any media	87.8	43.9
Standard of living index		
Low	75.8	32.8
Medium	23.4	38.0
High	1.1	29.3
Religion		
Hindu	81.4	81.7
Muslims	0.2	16.6
Others[♣]	18.4	1.7
Language spoken		
Hindi	82.9	86.5
Bengali and Oriya	6.0	12.7
Others[∝]	11.0	0.9
Number of women	**469**	**1145**

[♣] *Dominated by Christians*
[∝] *Dominated by indigenous languages*

Table 3: Percentage distribution of indigenous and non-indigenous ever-married women by employment characteristics, Jharkhand, NFHS-2, 1998-99

Employment characteristics	Indigenous women	Non-indigenous women
Employment status		
Currently working	41.0	12.7
Worked in the past 12 months	4.5	2.2
Not worked in past 12 months	54.4	85.2
Work status		
Working in family farm/business	40.8	26.5
Employed by someone else	36.0	32.4
Self employed	23.2	41.2
Continuity of the employment		
Through out the year	43.1	50.0
Seasonally	51.7	44.1
Once in a while	5.2	5.9
Occupation		
Professional/technical/service	2.4	17.6
Clerical/sales	14.7	5.9
Agricultural worker	53.6	32.4
Other workers (skilled/unskilled/manual)	29.4	44.1
Husband's occupation		
Professional/technical/service	4.9	22.2
Clerical/sales	5.7	20.8
Agricultural worker	62.3	19.8
Other workers (skilled/unskilled/manual)	27.1	37.3
Number of women	**469**	**1145**

Table 4: Percentage distribution of indigenous and non-indigenous ever-married women by selected socio- demographic indicators, Jharkhand and all India, NFHS-2, 1998-99

Selected socio-demographic indicators	Jharkhand		All India	
	Indigenous women	Non-indigenous women	Indigenous women	Non-indigenous women
No education	89.2	45.9	79.0	43.8
Not exposed to any mass media	87.8	43.9	61.8	31.0
Total Fertility Rate‡	2.30	2.62	3.06	2.66
Birth order 3+	20.4	16.2	18.5	17.2
Desire to have more children with 3 or more living children	37.8	7.7	24.9	12.9
Not currently using any contraceptive	84.2	56.3	60.9	46.5
Number of women	**1,614**		**90,303**	

‡*Rates for women age 15-49 years*

Table 5: Percentage distribution of indigenous and non-indigenous ever-married women by selected maternal, reproductive health and HIV/AIDS indicators, Jharkhand and all India, NFHS-2, 1998-99

Selected maternal, reproductive health and HIV/AIDS indicators	Jharkhand		All India	
	Indigenous women	Non-indigenous women	Indigenous women	Non-indigenous women
No ANC Check-ups	73.7	37.3	43.1	27.9
No Tetanus toxide injection	55.3	30.7	38.7	19.2
No IFA tables taken	81.7	50.7	51.4	37.0
Delivery at home	93.5	68.7	81.8	59.0
Urinary tracts infections (UTIs)	28.1	25.4	20.4	17.0
Any reproductive health problem	43.3	41.4	42.0	39.6
Not heard about AIDS	95.2	65.0	82.8	51.6
Knows no ways to avoid AIDS	84.6	65.5	44.6	33.6
Number of women	**1,614**		**90,303**	

Table 6: Percentage distribution of indigenous and non-indigenous ever-married women by selected nutritional indicators, Jharkhand and all India, NFHS-2, 1998-99

Selected nutritional indicators	Jharkhand		All India	
	Indigenous women	Non-indigenous women	Indigenous women	Non-indigenous women
Salt not iodized at all	21.0	15.2	34.0	20.7
Salt not iodized up to 30 ppm#	77.1	56.3	75.3	56.3
Women not consuming specific food items at least once in a week				
Milk or curd	80.8	44.9	65.6	37.9
Pulse or beans	22.0	7.8	19.4	11.0
Green, leafy vegetables	4.4	2.2	19.5	13.1
Fruits	87.3	72.9	79.1	60.3
Eggs	80.6	73.8	78.1	72.2
Chicken/meat/fish	86.4	75.5	74.3	66.6
Underweight (BMI < 18.5 kg/m^2)	40.9	30.9	46.3	30.5
Anemia	85.6	59.8	64.9	47.6
Number of women	**1,614**		**90,303**	

#ppm - parts per million

Table 7: Disadvantage ratio for selected socio-demographic indicators, Jharkhand and all India, NFHS-2, 1998-99

Selected socio-demographic indicators	Jharkhand	All India
Literacy	193	180
Not regularly exposed to any media	200	199
Total Fertility RateΨ	88	115
Birth order 3+	126	108
Desire to have more children with 3 living children	491	193
Not currently using any contraceptive	150	131

Ψ*Rates for women age 15-49 years*

Table 8: Disadvantage ratios for selected maternal and reproductive health and HIV/AIDS indicators, Jharkhand and all India, 1998-99

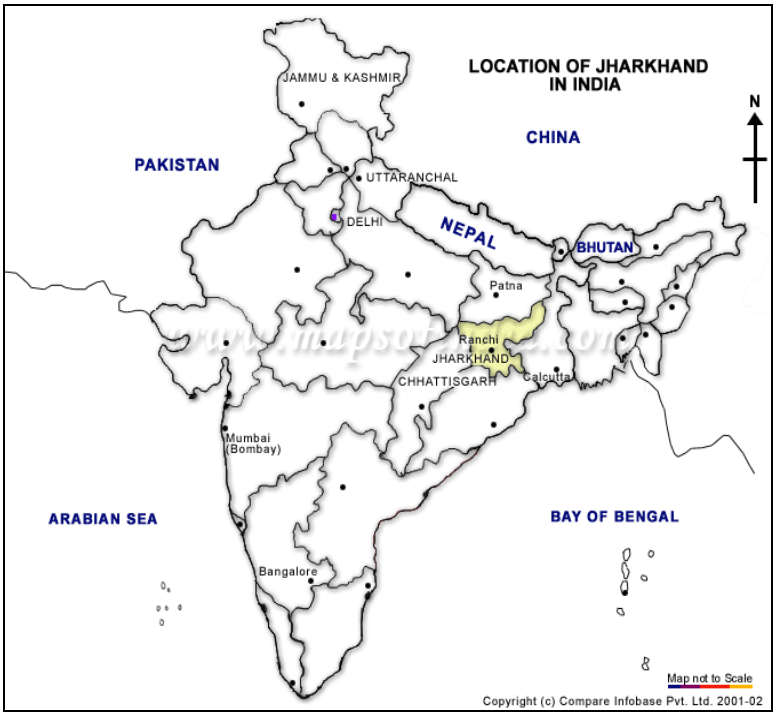
Selected maternal, reproductive health and HIV/AIDS indicators	Jharkhand	All India
No ANC	198	154
No Tetanus toxoide injection taken	180	202
No IFA tablets taken	161	139
Delivery at home	136	139
Urinary tracts infections (UTIs)	111	120
Any reproductive health problem	105	106
Not heard about AIDS	146	160
Knows no ways to avoid AIDS	129	133

Table 9: Disadvantage ratios for selected nutritional indicators, Jharkhand and all India, 1998-99

Selected nutritional indicators	Jharkhand	All India
Salt not iodized at all	138	164
Salt not iodized up to 30 ppm#	137	134
Women not consuming specific food at least once in a week		
Milk or curd	180	173
Pulse or beans	282	176
Green, leafy vegetables	200	149
Fruits	120	131
Eggs	109	108
Chicken/meat/fish	114	112
Underweight (BMI < 18.5 kg/m^2)	132	152
Anemia	143	136

#ppm - parts per million

Map1: Map of India showing the location of Jharkhand State in India



Source: www.mapsofindia.com

Map 2: Map of Jharkhand State with the districts

Source: www.censusofindia.net