

“Please, Sir, I Want Some More.”: (A Case Study of Child Mortality of Palghar District, State of Maharashtra, India, from August 2014 – October 2016)

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Abstract

This study examines the relationship between climate change and undernourishment and its negative impact on child health. The focus of this study is Palghar District (which was formed on August 1, 2014, in State of Maharashtra, India). This paper examines the efficacy of the role of healthy government initiatives and their awareness among people in overcoming the adverse effects of climate-change.

The study is based on interviews with the District Collector, various government officials and anthropologists working in the area, as well as secondary data collected from the Palghar District Collectorate. As the data made available by the government were limited, the study is unable to supply extensive information about such aspects as the beneficiaries of various welfare schemes, project costs and cost analysis.

Palghar district has reported 64 per 1000 child deaths and 44 per 1000 infant deaths between April and October, 2016. The researcher tried to find links between various potential variables and child mortality in this administrative region. The researcher hopes that by giving voice to a localised issue and discussing possible solutions for curbing the problem of child mortality due to undernourishment, it may be possible to find a long-term and comprehensive model for a solution for the same problem around the world.

Keywords: Climate changes, child health, India

“Please, sir, I want some more.”: (A Case Study of Child Mortality of Palghar District, State of Maharashtra, India, from August 2014 – October 2016)

The title of this paper makes reference to a very famous scene in English Literature. In Charles Dickens’ *Oliver Twist*, the undourished and hungry little Oliver asks for more food and is severely beaten. The children

discussed in this study are in a similar situation. They may not be able to ask for more always, but their condition is just as appalling as was that of Oliver.

Introduction

There has been growing concern in both climatological and medical communities that global climate change is likely to have wide-ranging impact on health. The potential health effects from these changes are many. Overall, negative health impacts may outweigh the positive ones (IPCC, 2001b). The major potential health impacts have been classified as direct and indirect impacts, according to whether they occur predominantly via the direct effects of exacerbated values of one or more climate variables (e.g. temperature, precipitation, solar radiation) on humans, or are mediated by climate-induced changes in complex biogeochemical processes or climatic influences on other environmental hazards (IPCC, 1996b). Climate variables such as extended rain leading to moist and low temperature, or heat, cause various diseases. Low and moist temperature severely affects patients suffering from pneumonia, hypothermia and skin diseases.

In tribal areas, most children are delivered at home. The warm in-utero environment is replaced by one that is cold and moist, because the parents are generally unable to regulate the temperature to provide a conducive environment. Infants thus suffer from hypothermia in extreme cases. They are also exposed to the risk of vector-borne diseases such as malaria, dengue and diarrhoea.

In addition, extreme undernourishment is rampant among these tribal populations due to unbalanced diets. They do not get enough calories, protein or micronutrients. Consequently, the children display the classic symptoms of undernourishment — stunted growth, thin body, very poor energy level, swollen legs and abdomen. Low immunity makes children susceptible to infections. These impacts can be multiple, simultaneous and significant.

One of the many challenges to policy makers and resource managers, then, is how to cope with all of these potential, and simultaneous, impacts.

Background

This study echoes the same concerns at the micro level. It is a case study of Palghar District from the State of Maharashtra, India. The District was legally formed on August 1, 2014. Therefore, the study period here is 2014 onwards.

Palghar is located nearly 107 kilometres off Mumbai (Greater Mumbai), the financial and commercial capital of India. Palghar District attracted media attention due to the high percentage of deaths due to

undernourishment, and has, in fact, acquired the dubious distinction of being the second in this respect (after Nandurbar District) in Maharashtra.

Of the total population of Palghar, 37 percent are tribals. There are eight tehsils in Palghar and 90 percent of the tribal population of Palghar is concentrated in four of these tehsils.(Table 1.1)

These tribal communities are deeply connected to local ecosystems and are economically and culturally dependent on fish, wildlife, plants, and other resources from the land. Thus, these communities are adversely affected by changing climate or outright loss of habitats suitable for native species and resources.

According to *Primitive Tribes of Central India* (1934), undernutrition was not a problem about half a century ago. Similarly, “Kings of the Jungle” (*Jangalche Raje*) published in 1954, focused on the areas under consideration but made no reference to undernutrition⁶. Sadly, the previously healthy relationship of these communities with the forest has deteriorated now. The geographical boundaries of reservations and resource availability restrict the options for relocation, thus limiting opportunities to move to areas where climate change impacts are not so severe. Tribal rights to access resources on usual and accustomed areas outside of reservation boundaries are based on location, regardless of climate-induced shifts in resource availability. This leaves tribes in a position where they may no longer have access to important subsistence, medicinal, and cultural resources. Adverse effects of climate change have manifested themselves as the continuing disappearance of roots, berries, and other traditional food sources. All this may, in turn, lead to the unravelling of the traditional practices and ceremonies that have bound tribal people and societies together for generations. The traditional ecological knowledge and governance structures of the tribes may be used to alleviate the significant climate-related challenges they face. To accomplish this, tribes should be allowed to participate meaningfully in sustained scientific programmes to understand how climate change impacts them, how they can and should be involved, and should be allowed to propose their traditional ecological knowledge as a valuable tool in developing solutions for many such problems. In the long run, these measures will help the tribal community counter not only the problems associated with climate change but also other related issues like infant mortality, child mortality and undernourishment.

Research Methodology

This study is largely based on focussed interviews with the District Collector, doctors working in the area, health officers and anthropologists

⁶ This was told to the researcher by one of the respondents during an interview.

working in this region, and the secondary data collected from the Palghar District Collectorate. Based on the interviews and data collected, this researcher attempted to explain and describe the facts uncovered.

India-specific adjustments have been made wherever required. For instance, the international understanding of the age of ‘children’ is from 0 to 5 years; but in India this is 0 to 6 years, the age of enrolment in schools.

Demographics of Palghar

The demographic composition of Palghar is a mix of tribal and urban-rural population. But the cause of concern is tribal areas where the quality of life is appalling.

Interestingly, the tribal population scores well on the various indicators of sex and gender. The women outnumber the men (Table 1.1) as the tribals believe that girl children bring them prosperity and fortune. Women are seen as the source of life and sustenance. A girl manages household duties until she marries, and at her marriage her parents earn a bride price. After marriage, it is she who is the ‘man of the house’, earning the family’s livelihood. Thus, girls are preferred and sex ratio imbalance or child discrimination is never a problem in these communities. Among primitive tribals, in the absence of financial capital, human and social capital assumes tremendous importance.

Unfortunately, while the women are the human and social capital for these tribes, they are valued only as much as their perceived utility value to their families in particular, and to the community at large. Women's reproductive abilities are prized far more than the children. In other words, raising children is not a priority, and the infant mortality passes disregarded.

Of the eight tehsils in Palghar, the highest concentration of tribal population is in Mokhada, which is situated in a lush green landscape on the slopes of the Sahyadris. This is an area where the food with the highest nutrient content — Ragi (red finger millet) — is plentifully grown; yet, paradoxically, it is also the area with the highest number of child deaths due to undernourishment. Local inquiries point to the simple conclusion that poverty is the main cause of undernourishment and related problems.

Table No.1.1: Palghar District Scheduled Tribes (STs) population

Sr. No	Tahsil	Total Population			ST Population			Percentage of ST population
		Male	Female	Total	Male	Female	Total	
1	Vasai	709771	633631	1343402	48921	49377	98298	7.32
2	Palghar	288514	261652	550166	83424	84728	168152	30.56
3	Dahanu	199574	202521	402095	135842	142062	277904	69.11
4	Talasari	76417	78401	154818	68699	71574	140273	90.61

5	Jawhar	69333	70854	140187	63280	65182	128462	91.64
6	Vikramgad	68489	69136	137625	62646	63722	126368	91.82
7	Mokhada	41691	41762	83453	38246	38596	76842	92.08
	Total	1545779	1444337	2990116	552218	565790	1118008	37.39

Source: Palghar District Collectorate

Table 1.2 shows the child deaths in Palghar tehsil in 2012-13 (when Palghar was an administrative division of Thane District) and in Palghar District from 2014-15 (when Palghar became an administrative unit) until October 2016-17. With the formation of the administrative unit of Palghar, the District administration accepted the challenge to solve the menacing problem of undernourishment and child deaths. Within just three years, that is, by 2015-16, the death rate fell by 64 percent. However, by October 2016, these figures changed yet again as the mortality rate increased dramatically by 15 percent. The situation in Mokhada tehsil, particularly, was very critical.

Out of every four child deaths, two are from the Kathkari tribe from Mokhada, which is considered as a primitive tribe. This tribe is a particularly vulnerable group. They are landless and have customarily been utilised in extracting kaat from khair trees, which is used as kaat (catechu) in paan (betel leaves). The tribes are adept at making traditional kaat using indigenous practices. Deforestation has depleted the quantity of khair trees, and this has had spiralling effects on the livelihoods of this tribe.

The increased child deaths in 2016-17 have been attributed to pneumonia and the low birth weight of the infants. It has been also reported that 50 percent of women were anaemic at the time of childbirth, which is another severe cause of concern.

Table 1.2 Year-wise Child Death Rate

Sr. No.	Tahsil	Year 2012-13*	Year 2014-15	Year 2015-16	Year 2016-17 (Up to October 2016)
1	Mokhada	60	57	43	64
2	Jawhar	95	50	42	45
3	Vikramgad	68	40	31	32
4	Wada	50	20	30	33
5	Palghar	100	14	8	7
6	Talasari	46	21	17	11
7	Dahanu	106	19	20	23

8	Vasai	64	11	17	26
Palghar District		589	232	208	241

Source: District Health Information System, Government of Maharashtra

Note 1: * 2012-13 figures are for Palghar Tehsil

Infant mortality (Table 1.3) fell by 66 percent in the year 2015-16, i.e., within two years of formation of Palghar District. But once again Mokhada tehsil is facing serious issues. In the same year, the infant mortality of Mokhada stood at 44 (per 1000 live childbirths) due to undernourishment, higher than any of the other tehsils. The mortality rate this year in 2016-17 (until October 2016) shot up by 83 percent in Mokhada tehsil alone. Overall, infant death rates in Palghar district rose by 19 percent until October 2016, as compared to the previous year of 2015-16.

Why are infants remaining so severely undernourished? It is not surprising that the cause is acute poverty. What is shocking is that parents prefer children to remain undernourished so that they can avail financial assistance (*Khavati* loan) in the form of ‘consumption loan’ during the lean period of monsoon. These loans are intended to benefit families having undernourished children, but they become the source of food for the entire family. These loans are meant to improve the condition of infants and eradicate usury, thus preventing the exploitation of tribals. Ironically, they have resulted in the exploitation of the infants themselves.

Table 1.3 Infant Death Rates

Sr. No.	Tahsil	Year 2012-13*	Year 2014-15	Year 2015-16	Year 2016-17 (Up to October 2016)
1	Mokhada	51	33	24	44
2	Jawhar	64	41	31	35
3	Vikramgad	48	29	23	22
4	Wada	33	14	23	16
5	Palghar	71	11	6	5
6	Talasari	32	13	12	7
7	Dahanu	75	13	14	18
8	Vasai	52	9	11	24
Palghar District		426	163	144	171

Source: District Health Information System, Government of Maharashtra

Note 1: * 2012-13 figures are for Palghar Tehsil

The Main Reason

The main reason of these deaths is undernourishment. Both mother and child are severely undernourished due to the dietary deficiency of micronutrients — such as Iron, Vitamin A and Iodine — essential for the mother's health and development of the child. Although, the remedies are low-cost and highly-effective — the consumption of iodized salt, proper cooking oil, and vitamins through low-cost nutritious food — they are not being implemented. Acute poverty deprives women of the nutritious food required during pregnancy and after childbirth and which is necessary for their own survival. Thus, the vicious cycle of undernourishment from one generation to the next continues.

Palghar's undernourishment problem is a chronic one and cannot be fixed with nutritious food alone. The lack of income leads to lack of spending and procurement of basic necessities, leading to nutrient deficiency affecting everybody's health. The situation worsens with decreasing traditional sources of food for these tribes.

There are multiple reasons for the low income of these tribes. The primary one is that they are dependent on forest products. Deforestation is causing a loss of livelihood for them. Most tribal people do not have land entitlements or ownership rights. The land allotted to tribals as per the Forest Rights Act 2006 is most often uncultivable. Topographically, more than 90 percent of this land is barren. In the less than 10 percent that is cultivable, they cultivate only during one agricultural season, that is, *Kharif* season (monsoon season in India). The land remains untouched for the rest of year; there is no crop-rotation; and there are inadequate irrigation facilities. Economic self-interest causes the tribals to focus on agriculture as their main source of income during the monsoon, and to ignore their children's health. The women are the wage earners while the men are the dependent population, involved in various unsocial activities such as excessive alcohol consumption and drug addiction. This needless spending just adds to the problems of the family.

Rampant illiteracy and unskilled labour are two other important reasons for the low incomes. The government machinery is working extensively to provide a livelihood to many people. Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) is the prime employment generation agency and guarantees livelihood security. But policy-paralysis and hindrances in implementation in the form of delayed payments, discriminative remuneration and the creation of fake identities, misappropriation of funds, etc., make it difficult to protect the interests of these people. The limited scope of work, inadequate infrastructure and limited employment opportunities for an ever-increasing labour force, lead to seasonal migrations. This displacement deprives them of the benefits to

which they are entitled as part of being beneficiaries to various government-related programmes and schemes.

With their migration, the hardships of mother and child start. When these tribal mothers and children migrate, they are in comparatively good health because of government interventions. They lose this local government support once they migrate. When they return during the next monsoon to cultivate their barren land, mother and child are very weak and vulnerable due to starvation and stinting on food to save money for investing in their agricultural activities. This negligence towards one's health naturally has severe consequences.

The long working hours with all the shifting and movement leave the mothers hardly any time to actually take care of their offspring. Juggling the roles of breadwinner and mother, the former takes the precedence. Mothers resort to home-remedies to cure their babies' severe condition, but too often it is too late to help the children. It may also be too difficult for the mothers to stay back in hospital and take care of the children because it would mean the loss of income. Monsoon being the only prime season to undertake work, they try to harness every possible opportunity, and the opportunity cost⁷ is the endangering of the child's health. It is difficult to judge, either morally or ethically, whether a mother should stay back in hospital and look after her child or look after the work of farmland or livestock. This dilemma leads to ineffective health care, as well as inefficient work and insufficient income. Thus, this tendency to resort to any available opportunity without judging its worth leads them to choose those options that are neither greatly profitable nor health-wise preferable.

This alternating of responsibility between different levels of health administration and the tribals continues until the mothers (and the family) agree to look after the needs of their ailing children. Climate change causes the monsoon to either retreat or advance, leading the period to either lengthen or shorten without warning. Similar changes are observed in other seasons as well due to climate change. Media attention is focussed on the issue of child mortality, but this is incomplete coverage because only the situation during the monsoon is covered, not the wider picture involving the related hardships and problems.

Climate change and its effects necessitate infants to adjust and adapt for survival. This is not always easy. For example, in 2016-17, Palghar reported excess rainfall, with 2,500 millimetres of rainfall in a single night.

⁷ 'Opportunity cost' is a concept in Economics which refers to the 'cost' paid by an individual for not utilising an opportunity. In one astounding example of this, the researcher came across a case where a mother was unwilling to accompany her seriously ill child to the hospital because she claimed that doing so would mean neglecting her bullock. As the bullock was required for agricultural work, it was perceived as more valuable.

Such extreme weather conditions lead to abnormalities of various sort like viral infections, hypothermia, etc. The response mechanism for this problem includes Central and State governments' intervention in general, and District Collectorate intervention in particular for Palghar District.

General Government Intervention

Among the multiple available Central and State government schemes, the following are of especial interest with reference to the area under consideration:

Setting up various mechanisms to fulfil the goal of sufficient nutrient-intake for children (age group 0-6).

Providing employment opportunities through various employment-generation programmes such as MGNREGA and skill development programmes.

Providing irrigation facilities to undertake agricultural practices throughout the year through Jalyukta Shivar Abhiyaan (a State of Maharashtra initiative to undertake water conservation programmes to make the State drought-free).

Creating awareness and providing counselling to pregnant women and lactating mothers, as well as arranging population awareness programmes on Family Planning and Child-rearing.

District Collectorate Intervention

The District Collectorate intervention lays emphasis upon the need to take innovative approaches to tackle problems, even going beyond Constitutional or legal provisions.

The following were the proactive measures taken by the Collectorate:

Facilitating the direct intervention of medical practitioners Anganwadi workers (Courtyard Shelter) and Accredited Social Health Activists (ASHA) who reach out to larger masses, either to provide medical facilities or to publicise nutritious local home-made food. This local food includes the highly nutrient-rich Ragi, which is abundant in this region.

Strengthening the health care initiatives with a comprehensive structure by including paediatricians from urban areas (doctors from reputable hospitals in Mumbai volunteered to take care of critical cases while government-appointed doctors worked locally), regular medical camps in rural areas, providing intensive and focussed need-based service to different cases of undernourishment, and mobile dispensaries.

Conducting regular and timely surveys of the situation of undernourishment in children and planning subsequent action accordingly.

Central-tracking of undernourished children by ASHA volunteers using software installed on cellular phones to save the time required for

manually updating records. This technology largely aided in providing timely treatment and care to children and decreasing the time-lag involved in identification and selection of undernourished children.

Involving business communities to finance or support skill-development and employment-generation programmes. Nearly 295 youths were being given training in October 2016, and by the end of February 2017, 800 more youths will be included in this programme, thus helping to control mass migration.

Diverting corporate funds to run inactive government schemes and going beyond the Corporate Social Responsibility (CSR) initiatives. For instance, there are plans for setting up an Apparel Park in Palghar. The sewing machines, fabric and materials for tailoring the clothes to be sold at the Apparel Park will be provided, thus promoting self-employment for women. The District administration will also play an active role in marketing the goods, with five-years of buy-back policy.

Providing support for maintaining livestock to promote the District administration health care initiatives. In fact, the District administration went ahead to make arrangements to look after the livestock as this remained an important reason for many families to avoid health care needs.

Recommendations

Wise policies and improvement of public health facilities given to tribals can reduce child deaths and can improve public health substantially. Continuous appraisal and promotion of schemes with timely support is essential. The following are some general recommendations in this regard:

Continuing Central and State government intervention in terms of health, infrastructure, employment, agriculture and allied activities like poultry-farming and pisciculture, food security and education to ensure sustainable development.

Improving literacy and providing education facilities up to higher secondary and graduation levels, in addition to vocational and agricultural training to ensure livelihoods.

Addressing issues of land ownership, public infrastructure, human resource development and good governance.

Reducing deforestation to provide climate-based development assistance.

Focussing on implementing land replenishing methodologies, as well as other related measures to ensure the preservation of ethnic cultures and traditions.

Promoting eco-tourism in this area to provide an alternative source of income, thus reducing the need for seasonal migrations.

Providing vocational training to women as they are the wage-earners for their families.

Conclusion

It is obvious that the comprehensive efforts of the State are important to tackle the issue of undernutrition. The Collector of Palghar hailed the positive changes as a “small victory” in the battle against undernutrition and child mortality. The consistent efforts of the government can be seen to have borne fruit where a few villages of Mokhada tehsil saw a 100 percent survival rate of children.

On the other hand, the programmes implemented have been criticised for being partial as they do not accommodate the tribal lifestyle and means. It is feared that the uneducated tribal population at large will find it difficult to cope with the industrial or corporate set-up.

There is some resistance from the tribals themselves to the help offered, as well. For instance, the government provides good quality of food supplements; they are sweetened to tempt the children to consume them regularly. However, the preferred taste for the tribals is savoury, and so they do not consume the supplements as regularly as they should.

Post-monsoon, the change in season brings a reduction in infections and vector-borne diseases. This is a good opportunity to restart treatment and reduce child mortality. However, the seasonal migrations begin around this time, and the returning population shows symptoms of severe undernourishment and related problems.

Palghar District was formed in August 2014. As such it has entered a new administrative set-up only within the last two years. As a District, more funds are available for ameliorating the distress of this section of the population. To do this effectively, there is a need to undertake an in-depth analysis of the problems of the tribals in this area. The current study is the first of its kind, but more such researches need to be encouraged to ensure a wholistic solution to the problem.

The researcher wishes to acknowledge the co-operation and help of Mr. Abhijeet Bangar, Collector, Palghar District, for his guidance and support in the completion of this research.

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