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CONTENTS

Editorial

Health and Development historically have a long relationship with each other. People with good health or nations with healthy people have always progressed well and it is the duty of the state to provide good health care facilities for its citizens. Unfortunately, governments in developing countries do not appear to be serious in this regard. Even after sixty seven years of independence, the governments in India have not been able to make people feel healthy. Of course, there is a boom of medical practitioners but a healthy environment with safe drinking water, clean air and pollution free surrounding is still a distant dream. Doctors are available to diagnose and treat ailments but we also need health engineers to make land safe from health hazards. GDP experts always believe in growth of consumption and manufacturing. More diseases mean need for more manufacturing of pharmaceutical products and consequent increased consumption or we can also say the reverse i.e. more medicines, more consumption and more diseases. Health and happiness seem to be the last priority of the governments and the age old practice of simple living in a clean and green, pollution free environment would perhaps, be termed as anti-development talk. When we talk of health, we always imagine a team of doctors and a crowd of patients. People are at the receiving end. Participation of people, their awareness and their age old traditions, all are important for making people healthy and happy.

The present issue focuses on Health issues and Development since sustainable development is only possible when people live a healthy, happy and simple life. Saira Gori and Hiral Sheth discuss sectoral action and proper planning for sustainable development. While Md Iqbal Kabir and his co-authors add the dimension of climate change, Rajesh Raushan and R Mutharayappa present a study on the impact of neighbourhood development on peoples' health. Similarly, Ranjan Kumar Prusty and his co-authors present a research paper on nutritional status of pre-school slum and non-slum children in some Indian cities. Priyam Sharma discusses the various available health care options and Seema Sharma tells us about CSR initiatives in mobile health services. Pekham Basu reveals the health hazards in mining sector through a case study of Silicosis in Rajasthan. In the Gender section, Vibhuti Patel discusses the practice of gender discrimination through NRTs and their implications on the reproductive rights of women. Subhash Chandra Singh's academic paper on confidentiality and transparency in medical practice is part of the Law & Development section. Other regular features include the institutional profile of VHAI by Chandra Ramakrishnan and toilet revolution a need for India by Raja Panchal in Waste Management section. Khushboo Sharma's RTI case study on land allotment rules to private hospitals shows how the gross violation of provisions adds to the suffering of common man and ends up in more profits to these establishments. Finally Kajal Kapoor presents the report of the Consultation on Housing for All organized by IDM.

The next issue of Oct-Dec. 2014 will be devoted to Education for Sustainable Development along with other regular features of RTI, Gender, Law etc. The authors and researchers are invited to contribute their original research papers and valuable contributions on the theme.

Arun Ojha

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Health and Sustainable Development: Need for Inter Sectoral Action

Saira Gori

Abstract

Many countries face a myriad of health-related problems owing to poverty and a lack of access to basic services/resources. The problems facing the health sector today are increasingly complex, multi-disciplinary in nature, often ill-defined, and have uncertain solutions. While the health sector itself is evolving in response to these challenges, it is unable to address these problems on its own. Many of the key determinants and solutions to health and disease lie outside the direct realm of the health sector, in sectors concerned with environment, water and sanitation, agriculture, education, employment, urban and rural livelihoods, trade, tourism, industrial development, energy and housing. Addressing the underlying determinants of health through inter sectoral efforts is key to ensuring sustainable health improvements and ecologically sustainable development. This implies that a combination of global, national and local strategies are needed, which must be harmonized in order to integrate health, environment and development concerns. Mechanisms to ensure coordination at national, regional and local levels regarding health effects assessment and the development of adequate reporting systems are commonly lacking. Apart from this, mechanisms are often not in place to ensure that such information, once obtained, is transmitted to the various relevant sectors for action. Integrated databases on development hazards, environmental exposures and health, are urgently required. Well developed health-and-environment information systems, based on relevant data sets, are essential if scientific monitoring information is to be provided in support of policy and decision-making, planning and evaluation.

Acronyms/Abbreviations

CCAs: Common Country Assessments, GAVI: Global Alliance for Vaccines and Immunization, LEHAPs: Local Environment and Health Action Plans, MDGs: Millennium Development Goals, NCDs: Non-Communicable Diseases, UNDAFs: United Nations Development Assistance Frameworks, UNEPs: United Nations Environment Programme, UNICEF: United Nations International Children's Emergency Fund, WHO: World Health Organisation

Introduction

The Millennium Declaration, adopted unanimously by world leaders in September 2000, sets a number of inter-related goals and targets which are based on principles of sustainable development and are aimed at making further progress in eradicating poverty and advancing healthy and sustainable human development. In addition to these commitments, health, sustainable development and poverty reduction are being addressed at the country level with comprehensive developmental strategy and planning tools such as the United Nations Common Country Assessments (CCAs) and the United Nations Development Assistance Frameworks (UNDAFs).

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The United Nations Millennium Development Goals are eight goals that all 191 UN Member States have agreed to work towards achieving by the year 2015. The MDGs are derived from this Declaration, and all have specific targets and indicators. The MDGs are inter-dependent; all the MDGs influence health, and health influences all the MDGs. For example, better health enables children to learn and adults to earn. Gender equality is essential for the achievement of better health. Reducing poverty, hunger and environmental degradation also depends on better health. It is pertinent to note here that the main health goals of the governments and WHO intend towards an attainment by all the people of the world, a level of health that will permit them to lead a socially and economically productive life. However, various trends, including globalization of trade, travel and technology, urbanization and the growth of megacities, widening gaps between rich and poor, the continuing burden of infectious diseases, the rise in non-communicable diseases, and the growth in environmental threats led to the reassessment of the renewed "Health for All in the 21st Century". It was a strategy adopted at the World Health Assembly in 1998 which set out global priorities and targets for the first two decades of the 21st century, which aimed to create the conditions for people worldwide to reach and maintain the highest attainable level of health throughout their lives. The strategy is based on the principles of social justice, equity and human development, and emphasizes the prevention of ill-health, minimization of health risks and promotion of population health. Conceived on these terms, the improvement of health requires more than the services delivered by the health sector alone; the contribution of other sectors is explicitly recognized as vital for improving the health and well-being of the population. This is emphasized in WHO's corporate strategy which establishes the goals of building healthy populations and communities and combating ill-health through the adoption of four strategic approaches:

- Reducing excess mortality, morbidity and disability, especially in poor and marginalized populations,
- Promoting healthy lifestyles and reducing factors of risk to human health that arise from environmental, economic, social and behavioral causes,
- Developing health systems that equitably improve health outcomes, respond to peoples' legitimate demands, and are financially fair,
- Developing an enabling policy and institutional environment in the health sector, and promoting an effective health dimension to social, economic, environmental and development policy.

Intersectoral Planning at National Level

While there are shared global and transnational problems, each country, region and community has its own unique problems, the solutions to which are determined by many factors, including: resources, customs, institutions and values. This implies that a combination of global, national and local strategies are needed, which must be harmonized in order to integrate health, environment and development concerns. Created as a dynamic programme of action within the UN's global partnership for sustainable development, Agenda 21 calls for new planning approaches in order to

achieve sustainable development. Specifically, it emphasized the integration of environmental and developmental concerns, the social sector, including health, into the process of development planning, the development of plans for priority actions based on cooperative planning between the various levels of government, NGOs and local communities. Agenda 21 emphasized upon a number of elements which are necessary for the integration of local and national health concerns into environment and development planning. These are:

1. Identification and assessment of health hazards associated with environment and development,
2. Development of environmental health policy incorporating principles and strategies for all sectors responsible for development,
3. Communication and advocacy of this policy to all levels of society and,
4. Participatory approach to implementing health-and-environment programmes.

Chapter 6 of Agenda 21 specified that countries should set priorities for action based on cooperative planning on various levels of government, non-governmental organizations and local communities. This provided an important opportunity for health authorities to influence planning at a national level, and to reverse the trend of environmentally-damaging and health-threatening development. Such planning, oriented to the prevention of health and environmental problems and involving all levels and sectors, is essential for achieving "Health for All" and sustainable development. Many countries have instituted new policy and planning frameworks, and have developed tools to make health and environment concerns an integral part of the planning process. On a world-wide basis, measures to incorporate health and environment issues into national plans and programmes have varied from country to country, depending on priorities, planning mechanisms, and the way in which planning responsibilities are divided. This has led to a wide variety of approaches being adopted including

- Preparation of health and environment plans for inclusion in the national plans for sustainable development,
- Integration of environmental protection and health plans into national economic and social development plans,
- Review and modification of sectoral plans to include health and environment concerns,
- Incorporation of health considerations into national environmental action plans,
- Intersectoral input into national health policy and plans.

Inter-Sectoral Planning at Local Level

Key to the Agenda 21 process has been the development of initiatives on the local/municipal level through dialogue between local government and its citizens,

organizations and private enterprises and the subsequent formulation of strategies based on information gathered through the consultation process. Local Agenda 21 and related activities include, among others, the WHO Healthy Cities Movement, and UN Habitat and UNEPs Sustainable Cities Movement. Local planning initiatives which address health and environment concerns in sustainable development have been collectively referred to as "Local Environment and Health Action Plans" or "LEHAPs". These include local Agenda 21 initiatives, which address health issues and/or involve the health sector in local development planning, as well as "Healthy Cities" type of approaches. The Healthy Cities concept and approach has been adopted in different ways in different places: Healthy Cities in Europe and Africa, Healthy Islands in the Western Pacific Region, Healthy Municipalities and Communities in North America, Healthy Villages in the Eastern Mediterranean, as well as healthy "settings" which encompass schools, marketplaces and many other sites and settings where people live, work and recreate. Preventing Disease through intersectoral action, inter-sectoral approaches and partnerships have been developed to tackle particular diseases, both communicable (infectious) and non-communicable. Communicable diseases were the focus of Chapter 6 of Agenda 21 as they occur mainly in developing countries, where poverty and poor environments greatly increase the risk of disease. Millions of poor people in the world are particularly vulnerable to such diseases. This fact poses a great threat to development, economy, human security, and also threatens sustainable development. Evidence shows that communicable diseases can be controlled in the world's poorest countries. Effective tools are available and many low-income countries have shown that by using these tools wisely, the disease burden can be reduced dramatically. Increasingly, policies and programmes to combat communicable diseases focus on integrated strategies. Such strategies simultaneously address the underlying causes of disease, often found in the broad socio-economic, cultural and physical environment, as well as addressing issues relating to the treatment of the disease condition itself.

New Resources and Partnerships for Infectious Disease Control

While there are practical and achievable ways of improving health, alleviating poverty and furthering sustainable development, many obstacles are still hampering effective efforts in the prevention and control of infectious diseases. These include:

- lack of funding;
- lack of attention to health impacts of activities in other sectors;
- weak health systems;
- low priority given to health;
- lack of political commitment;
- lack of inter sectoral action.

Specific diseases of childhood, well illustrate the benefits of an integrated approach. Every year some 12 million children die before reaching their fifth birthday,

many of them during their first year of life. Of these, 70% are killed by one of the five causes: diarrhea, pneumonia, measles, malaria or malnutrition, or a combination of more than one. Because their signs and symptoms may overlap, diagnosing a sick child can be difficult, and a single diagnosis may be often inappropriate. Treatment of the sick child may also be complicated by the need to combine therapies for several conditions. In response, WHO in collaboration with UNICEF, has developed the "Integrated Management of Childhood Illness." The Global Alliance for Vaccines and Immunization (GAVI) is another example of an international coalition of partners including WHO, UNICEF and the World Bank, national governments, foundations, the private sector and research and public health institutions addressing the Emerging Agenda for Global Health.

Non-communicable Diseases

While many countries continue to see their development efforts hampered by the burden of infectious diseases, the rising incidences of non-communicable diseases (NCDs) are proving to be quite a menace. NCDs were not highlighted in Agenda 21, yet it is clear that they represent an increasing threat to sustainable development. In 1999, NCDs were estimated to have contributed to almost 60% of deaths in the world, and 43% of the global disease burden. Based on current trends, these diseases are expected to account for 73% of deaths and 60% of the disease burden in the year 2020. The rapid rise of NCDs is threatening economic and social development as well as the lives and health of millions of people. They represent a major health challenge to global development in the coming century. Low and middle-income countries suffer the worst impact, and the rapid increase in these diseases disproportionately affects poor and disadvantaged populations; contributing to widening health gaps between and within countries. Four of the most prominent NCDs–cardiovascular disease, cancer, chronic obstructive pulmonary disease and diabetes are linked to common preventable risk factors related to lifestyle.

Strengthening Health System Performance

Health systems must be able to respond to the health and social needs of people throughout their lives. Building on primary health care, sustainable health systems need to guarantee equity of access to essential health functions. These functions include:

- making quality care available across an individual's life span;
- preventing and controlling disease, and protecting health;
- promoting legislation and regulations in support of health systems;
- developing health information systems and ensuring active surveillance;
- fostering the use of, and innovation in, health-related science and technology;
- building and maintaining human resources for health; and
- securing adequate and sustainable financing.

In 2000, WHO carried out the first ever global analysis of the world's health systems, that is all organizations, institutions and resources devoted to producing health actions (i.e. any effort, whether in personal health care, public health services or through intersectoral initiatives, whose primary purpose is to improve health). Five performance indicators were used to measure performance of health systems in 191 member states in trying to achieve three overall goals: good health, responsiveness to expectations of the population, and fairness of financial contribution. It was found that progress towards these goals depends crucially on how well systems carry out four vital functions: service provision, resource generation, financing and stewardship. Special emphasis was placed on stewardship, which has a profound influence on the other three aspects. The ultimate responsibility for the overall performance of a country's health system lies with government, which in turn should involve all sectors of society in its stewardship function. This is a major challenge for ministries of health.

It was found that progress towards these goals depends crucially on how well systems carry out four vital functions: service provision, resource generation, financing and stewardship. Special emphasis was placed on stewardship, which has a profound influence on the other three aspects. The ultimate responsibility for the overall performance of a country's health system lies with government, which in turn should involve all sectors of society in its stewardship function. This is another daunting task for health departments.

Moving Beyond the Health Sector

It is increasingly being recognized that many of the key determinants of health and disease–as well as the solutions–lie outside the direct control of the health sector, in sectors concerned with environment, water and sanitation, agriculture, education, employment, trade, tourism, energy and housing. Addressing the underlying determinants of health is key to ensuring sustained health improvements in the long-term, and ecologically sustainable development. As examples throughout this document illustrate, much progress has been made in forging closer links between health and other sectors, particularly through:

- local and national intersectoral health and development planning,
- increased use of planning tools such as health impact assessment procedures,
- integrated monitoring and surveillance systems,
- improved health information systems and indicators.

The policies of all sectors that affect health directly or indirectly need to be analysed and aligned to maximize opportunities for health promotion and protection. This will require health professionals to be more responsive to the primary motivations of professionals from these other sectors, and to be willing to negotiate for policies that are mutually beneficial. Effective joint action by health systems and the education sector could substantially contribute to the rapid and overall improvement of the health status of populations, and to a long-term reduction in health and economic inequalities. Economic and fiscal policies can significantly influence the potential for health gains

and their distribution in society. Fiscal policies that contribute to health–for instance, those that discourage use of harmful products and stimulate consumption of nutritious foods and the adoption of healthy lifestyles should be encouraged. Such policies, when combined with appropriate legislation and health education programmes, can nullify and even reverse negative trends. Agricultural policies can incorporate specific disease prevention measures in irrigation schemes, actively promote integrated pest management to minimize the use of toxic chemicals, establish land-use patterns that facilitate, rather than discourage human settlements in rural areas, encourage substitution for crops that harm health, and ensure safe and sufficient food production.

The Need for New Planning Tools

Health, environment and sustainable development policies and programmes depend on convenient access to information about a large variety of hazards, ranging from biological hazards to chemical hazards such as pesticides, to various physical and social factors. This is necessary if health authorities are to effectively discharge their responsibility to protect public health. But it also serves to clarify the extent to which health hazards are attributable to environmental conditions and/or to the activities of sectors other than health. Environmental monitoring systems need to be designed to ensure that the exposure information collected is relevant to health concerns, and not merely used to monitor effectiveness of environmental control measures. Currently, few monitoring systems are set up with the aim of comprehensively assessing various exposure routes (such as air and water) of potential contaminants. Moreover, integrated pollution control mechanisms are usually lacking. In general, knowledge of environment and health risks is segmented, and incomplete. Mechanisms to ensure coordination at national, regional and local levels regarding health effects assessment and the development of adequate reporting systems, need to be reassessed. Equally, mechanisms are frequently not in place to ensure that such information, once obtained, is transmitted to the various relevant sectors for action. Integrated databases on development hazards, environmental exposures and health, are urgently required. Well-developed health-and-environment information systems, based on relevant data sets, are essential if scientific monitoring information is to be provided in support of policy and decision-making, planning and evaluation.

Conclusions and Lessons Learned

In the past decade a number of lessons have been learned, which are key to ensuring healthy sustainable development. The first and foremost lesson is that, for development to be sustainable, it must benefit the health and well-being of both present and future generations. Development policies and economic strategies must be aligned with health objectives, as sustainable development is not possible where health is sacrificed for short term sectoral or economic gains. It is also clear that political commitment at all levels of government is a prerequisite to success. Where there is such commitment, health, environment and sustainable development issues may move higher up on the international development agenda. Successful strategies and policy measures have been shown to have a number of elements in common, namely:

- focus on diseases, health conditions and risk factors, both present and future, that threaten sustainable development;
- focus on the broader determinants of health and disease;
- focus on good governance and sustainable health systems;
- forge partnerships with sectors outside of health

"Environment and development issues need to be addressed at all levels simultaneously, so that national policymaking is informed by what is happening on the ground, and local initiatives can move forward in a supportive policy and legislative environment". Neither environment and development issues, nor disease conditions can be successfully addressed in isolation. Linkages between sectors, between initiatives and between government and civil society are key to broad-based, integrated and cross-sectoral approaches that address the underlying determinants of health and sustainable development. While there is more acceptance now of links between health status outcomes and the determinants of health, particularly those arising from the activities of sectors other than health, there are still problems in acting upon this knowledge. Greater attention needs to be paid to developing managerial, administrative, institutional, human resource, legal, and financial capacities to address health, environment and development linkages, and to work in an integrated fashion both between and within sectors. A wide range of epidemiological and social science tools are available to assist countries and communities in assessing environment and health situations, to monitor progress in implementation process evaluation and outcome. Integrated database with indicators which are understandable and usable by a wide range of sectors and communities, involving multiple stakeholders from the beginning is essential for effective changes and tracking progress, as well as for building the evidence base for effective health, environment and development policies.

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Health Planning and Economic Development in India

Hiral Sheth

Abstract

The healthcare sector in India has come of age. There has been a tremendous amount of growth in terms of physical size, investments, expenditures and utilization of healthcare services. Unfortunately, the average quality of services is not commensurate with what it is capable of achieving. Building health systems that are responsive to community needs, particularly for the poor, often require tough political and administrative decisions. Health is a priority goal in its own right, as well as central input into economic development and poverty reduction. While economic infrastructure accelerates the process of growth, social infrastructure accelerates the process of human development. Health sector is complex with multiple goals, multiple products and different beneficiaries. In recent times, privatization and liberalization characterize the new economic policies being pursued in the country. This research paper attempts to study the crucial linkage between health and economic development and understand the current health scenario in the country in the backdrop of the Eleventh five year plan and the ongoing Twelfth five year plan.

Acronyms/Abbreviations

BPL: Below Poverty Line, CHCs; Community Health Centres, GDP: Gross Domestic Product, GoI: Government of India, HLEG: High Level Expert Group, MDGs: Millennium Development Goals, NRHM: National Rural Health Mission, NUHM: National Urban Health Mission, PHCs: Primary Health Centres, RSBY: Rashtriya Swasthya Bima Yojana, SSA: Sarva Swasthya Abhiyan, UHC: Universal Health Coverage, WHO: World Health Organisation.

Introduction

Health is considered as one of the crucial components of the social infrastructure. The World Health Organization (WHO) has defined health as "A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 1992). Indeed, economic growth is incomplete without human development. Social development focuses on human resource development, implying the development of skilled personnel as well as healthy and efficient human beings. Accordingly, economic and social infrastructures are complementary to each other; reinforcing the impact of each other (Jain and Ohri, 2010). The term health sector reform is being used with increasing frequency in the health development literature. Peter Berman (Berman, 1995) describes health sector reform as 'sustained purposeful change to improve the efficiency, equity and effectiveness of the health sector.' Also, there is now a measure of agreement about the dimensions, scope and objectives of reform in

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industrialized countries (OECD, 1994). The experiences of many developing countries which have embarked upon a process of macroeconomic reforms however, shows that accentuation of reforms leads to reduction in public spending on basic services and programmes directly related to social sector development or human resource development (Gupta and Sarkar, 1994; Mahbub ul Haq, 2001).

Economic reforms towards liberalisation began in India in the early eighties. The classical rate of Hindu growth in the eighties had doubled from 3% to 6%, without much inflation and with declining levels of poverty. In fact, the post (1991) reform period slowed down growth, increased poverty and inflation, and reversed many trends of the eighties. Today, healthcare has become fully commodified and the private sector is the dominant global healthcare provider including in India. New medical technology has only helped such a development while rapidly eroding the character of healthcare as a service. This process of commodification has created a unique characteristic of the health sector making healthcare a supply-induced demand market. Under Structural Adjustment and Stabilization Policy the State's intervention in the health sector declined. Liberalisation and globalisation policies being pursued since the beginning of this decade have had serious impact on the social sector spending, especially, healthcare programmes which are necessary for rapid economic as well as human development.

Interface between Health and Economic Development

Improved health contributes to development of an economy in at least seven ways (World Bank, 1993; and Gupta and Mahajan, 2003):

First, good health reduces production losses caused by workers' illness. In other words, there are gains in workers' productivity from better health. For example, as early as in 1936, J.A. Sinton calculated that malaria caused a loss of Rs.1000 crore per annum in India.

Second, improved health reduces the losses due to morbidity and mortality. These losses are of three types: cost of death (value of each life saved), cost of morbidity (loss of work days and work efficiency due to sickness) and cost of treatment (money spent on purchase of drugs; medical services, transport to hospital, etc.)

Third, it permits the use of natural resources that had been totally or nearly inaccessible because of disease. Some health investments raise productivity of land. Areas previously blighted by mosquitoes become attractive for settlement. Migrants move in, which raises output. National productivity also increases when health programmes open hitherto unavailable avenues of production.

Fourth, better health increases the enrolment of children in schools and enhances their ability to learn. This contributes to the welfare of the future generation which promotes an essential condition for sustainable development.

Fifth, it saves resources for alternative uses, which would otherwise have to be spent on treating illness. Healthcare expenditure that reduces the incidence of diseases results in big savings in treatment costs. In case of health problems like Polio and AIDS, it has been estimated that savings in annual treatment costs far exceed the investment required to eliminate it over a period of time.

Sixth, it makes life more satisfying by contributing to better quality of life. Two of the three determinants of the physical quality of life index, relate to health, viz, infant mortality rate, longevity of life, and the third being the literacy rate. It is undisputed that adequate health services and good health are associated with a state of enthusiasm, vigour and happiness. Happiness, being a subjective state, is a function of several factors. But at a more physical and mental level, it is believed that happiness of the people is obtained through a sufficient level of healthcare in a society.

Seventh, it has been found that the poor die younger and suffer more from disability. They are exposed to greater risks from unhealthy and dangerous environment both at home and at work. If free healthcare is not available and the family's breadwinner falls ill then the entire family suffers because of huge treatment costs which often slide them into debt burdens. Poor people depend on the physical labour for income and they have no savings cushion. They therefore, find it impossible to recover from an illness with their human and financial capital intact. So the social justice dimension of health sector development is prominent as the different economic gains are relatively greater for the poor people, who are typically most handicapped by ill health.

Thus, economic development brings about quantitative and qualitative improvement in health services and thereby improves the health of the people. Being recognized as rapidly growing and emerging economy, India needs to pay serious attention towards the health sector.

Health Scenario in India

The healthcare services in India have various dimensions. There exist multiple systems, various types of ownership patterns and different kinds of delivery structures. The provision of healthcare services is complex. It is provided mainly by the public and the private sector. The Indian Constitution does not list health as a fundamental right. In the constitutional provisions, health is primarily a state subject. The State's insufficient commitment to provide healthcare for its citizens is reflected not only in the inadequacy of the health infrastructure but also in declining support to various healthcare demands of the people. At the same time the new political economy has failed to strengthen the welfare role of the State (Duggal, 2004). Healthcare expenditures have been affected both in quantitative terms (declining real expenditures) and qualitative terms (increasing proportion of establishment costs and declining proportion on medicines, equipment, maintenance and new investments) (Duggal, 1998).

Failure of public healthcare facilities due to urban bias in distribution, limited funding, inability to assure adequate staff, essential supplies of medicines and equipments, poor maintenance and reduced confidence amongst general public has led to reduced credibility and acceptability of public health system. The Mckinsey Report also showed poor coverage of population by public health infrastructure. In spite of programs like Health for All by 2000, MDGs 2000, National Health Policy 2002, India Vision 2020, Health for All remains a distant dream for India.

This has resulted in increased reliance on private healthcare services. The private sector accounts for more than 80% of total healthcare spending in India (Emerging Market Report, 2007). Demand has outstripped supply in India's healthcare sector, which is growing at a faster pace year after year. So, though there is state intervention in the health sector in the form of provision of public healthcare, there has been increasing dependence on private healthcare services. People want value for their money incurred on treatment costs. Thus, the political economy of health in India is increasingly following the market route and paving way for increasing role of private sector which is considered to be efficient and providing value for money. However, there are problems and issues involved like affordability, lack of regulation and high charges of the private service providers affecting equity in healthcare. The focus of the Eleventh Five Year Plan therefore, was on 'inclusive growth.'

Eleventh Plan and the Health Sector

Economic Growth has to trickle down to include all the sections of the population. In India, inclusive approach is not a new concept as Indian development strategies relied on the socialistic pattern of society through economic growth with self reliance, social justice and alleviation of poverty. The Eleventh plan (2007-12) was to provide an opportunity to restructure policies to achieve a New Vision based on faster, broad-based, and inclusive growth. One of the objectives of the Eleventh Five Year Plan was to achieve good health for people, especially the poor and the underprivileged. In order to do this, a comprehensive approach was needed (GOI, 2006).

National Rural Health Mission (NRHM), a national effort at ensuring effective healthcare, especially to the poor and vulnerable sections of the society was launched on 12th April, 2005 for a period of seven years (2005-2012)) throughout the country with special focus on 18 states viz. Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Himachal Pradesh, Jharkhand, Jammu and Kashmir, Manipur, Mizoram, Meghalaya, Madhya Pradesh, Nagaland, Orissa, Rajasthan, Sikkim, Tripura, Uttarakhand and Uttar Pradesh. The main aim of NRHM is to provide accessible, affordable, accountable, effective and reliable primary health care, especially to the poor and vulnerable sections of society. The NRHM aims to provide an overarching umbrella to the existing programmes of health and family welfare. The sub-centres, Primary Health Centres (PHCs) and Community Health Centres (CHCs) have been revitalized through better human resource management. With AYUSH (Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy) the mission also aims at addressing sector-wide health through sanitation and hygiene, nutrition and safe drinking water as basic determinants of good health (GOI, 2005).

The Eleventh Five Year Plan aimed for inclusive growth by introducing National Urban Health Mission (NUHM), which along with National Rural Health Mission (NRHM) formed Sarva Swasthya Abhiyan (SSA). NRHM was launched to meet health needs of all age groups and to reduce disease burden across rural India. NUHM will be launched to meet the unmet needs of the urban population. NUHM based on health insurance and Public-Private Partnership will provide integrated health service

delivery to the urban poor. NUHM will be aligned with NRHM and existing urban schemes. Overall, Sarva Swasthya Abhiyan will aim for inclusive growth by finding solutions for strengthening health services and focusing on neglected areas and groups (GOI, 2007).

Twelfth Plan Strategy - Universal Health Coverage (UHC)

The Twelfth Plan (2012-17) seeks to strengthen initiatives taken in the Eleventh Plan to expand the reach of healthcare and work towards the long term objective of establishing a system of Universal Health Coverage (UHC) in the country. This means that each individual would have assured access to a defined essential range of medicines and treatment at an affordable price, which should be entirely free for a large percentage of the population. The High Level Expert Group has defined UHC as follows: 'Ensuring equitable access for all Indian citizens in any part of the country, regardless of income level, social status, gender, caste or religion, to affordable, accountable and appropriate, assured quality health services (promotive, preventive, curative and rehabilitative) as well as services addressing wider determinants of health delivered to individuals and populations, with the Government being the guarantor and enabler, although not necessarily the only provider of health and related services.' Based on the recommendations of the High Level Expert Group and other stakeholder consultations, the key elements of the strategy that should be followed in the Twelfth Plan to move towards UHC, which is a process that will unfold over two or three Plan periods should include:

1. There must be substantial expansion and strengthening of the public sector healthcare system if we are to meet the health needs of rural and even urban areas. The bulk of the population today relies upon private sector health providers, paying amounts which they cannot afford, because of the inadequate reach of the public sector. While the private sector can continue to operate for those who can afford it, an expansion of good quality affordable public sector care is essential. As supply in the public sector increases, it will cause a shift towards public sector providers freeing the vulnerable population from dependence on high cost and often unreachable private sector health care.

2. Health sector expenditure by the Centre and States, both Plan and Non Plan, will have to be substantially increased by the end of the Twelfth Plan. It has already increased from 0.94 percent of GDP in the Tenth Plan to 1.04 per cent in the Eleventh Plan. The provision of clean drinking water and sanitation as one of the principal factors for control of diseases is well established from the history of industrialized countries and it should have high priority in health related resource allocation. The percentage for this broader definition of health sector related resources needs to be increased to 2.5 per cent by the end of the Twelfth Plan. Since expenditure on health by the State Governments is about twice the expenditures by the Centre, the overall targets for public sector health expenditure can only be achieved if, along

with the Centre, State Governments expand their health budgets appropriately. A suitable mechanism should ,therefore, be designed to incentivize an increase in State Government spending.

3. Financial and managerial systems will need to be redesigned to ensure more efficient utilization of available resources, and to achieve better health outcomes. Coordinated delivery of services within and across sectors, delegation matched with accountability, fostering a spirit of innovation are some of the measures proposed to ensure better health outcomes.

4. Efforts would have to be made to find a workable way of encouraging cooperation between the public and private sector in achieving health goals. This would include contracting in of services for gap filling, and also various forms of effectively regulated and managed PPP, while also ensuring that there is no compromise in terms of standards of delivery and that the incentive structure does not undermine healthcare objectives.

5. The present Rashtriya Swasthya Bima Yojana(RSBY) which provides 'cash less' in-patient treatment for eligible beneficiaries through an insurance based system will need to be reformed to enable access to a continuum of comprehensive primary, secondary and tertiary care. The coverage of RSBY was initially limited to the BPL population but, was subsequently expanded to cover other categories. It should be the objective of the Twelfth Plan to use the platform and existing mechanisms of RSBY to cover the entire population below the poverty line. In planning health care structures for the future, it is desirable to move away from a 'fee-for-service' mechanism for the reasons outlined by the HLEG, to address the issue of fragmentation of services that works to the detriment of preventive and primary care and also to reduce the scope for fraud and induced demand.

6. Availability of skilled human resources remains a key constraint in expanding health service delivery. A mere expansion of financial resources devoted to health will not deliver results if health personnel are not available. A large expansion of medical schools, nursing colleges, and so on, is, therefore, necessary and public sector medical schools must play a major role in the process. Since the present distribution of such colleges is geographically very uneven, a special effort will be made to expand medical education in states which are at present under-served. In addition, a massive effort will be made to recruit and train paramedical and community level health workers.

7. An important lesson from the Eleventh Plan is that the multiplicity of Central Sector and Centrally Sponsored Schemes addressing individual diseases, or funding activities or institutions, prevents a holistic health-systems-approach, leads to duplication and redundancies, and makes coordinated delivery difficult. This multiplicity also constrains the flexibility of states to make need based plans or deploy their resources in the

most efficient manner. As a result, new programmes cannot take off and old ones do not reach their maximum potential. The way forward is to focus on strengthening the pillars of the health system, so that it can prevent, detect and manage each of the unique challenges that different parts of the country face.

8. A series of prescription drugs reforms, promotion of essential, generic medicines, and making these universally available free of cost to all patients in public facilities as a part of the Essential Health Package will be a priority.

9. Effective regulation in medical practice, public health, food and drugs is essential to safeguard people against risks, and unethical practices. This is especially so given the information gaps in the health sector which make it difficult for individuals to make reasoned choices.

10. The health system in the Twelfth Plan will continue to have a mix of public and private service providers. The public sector health services need to be strengthened to deliver both public health related and clinical services. The public and private sectors also need to coordinate for delivery of a continuum of care. A strong regulatory system would supervise the quality of services delivered. Standard treatment guidelines should form the basis of clinical care across public and private sectors, with adequate monitoring by the regulatory bodies to improve the quality of care and control the cost of care (Twelfth Plan, 2012-17).

In a country characterized by rapid industrialization and economic growth along with demographic and disease transitions, it is vital to address issues and challenges in achieving health equity. By moving towards Universal Health Coverage, India can contribute to the larger cause of equity and social justice.

Conclusion

Healthcare is at a stage of paradigm shifts in terms of changing morbidity patterns and increasing disease burden for both rural and urban India. The health of population is a significant issue in public policy discourse in every mature society. During the last decade there has been an abrupt switch to market based governance styles leading to reduced state role in health sector. Due to weak and inefficient public health services many people have been forced to resort to expensive private provision or at times, even forego care entirely except in life threatening situations, and often sliding into indebtedness. A multi-pronged approach from key stake holders is necessary to address the issue. Both the public and private sector need to work in tandem to make healthcare available, accessible and affordable to all.

To make the growth process 'inclusive' it is essential to enrich the role of the State retaining a strategic directional role for the good health of all its citizens in accordance with the constitutional mandate. In this changing world, with unique challenges that threaten the health and well-being of the population, it is imperative that the government and community collectively rise to face these challenges simultaneously, inclusively and sustainably.

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Climate Change and Health Adaptation for Sustainable Development

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Abstract

Weather and climate play a significant role in people's health. Changing climate has direct or indirect effects on health, all over the world. The adverse effects of climate change will mostly be seen in Least Developed Countries, which are already burdened with world's most prominent climate sensitive health challenges. This paper makes an attempt to highlight the negative impacts of changing climate on health and establish the need for linking climate change and health adaptation with sustainable development. A comprehensive summary of the epidemiological evidence of climate sensitive health outcomes and particularly vulnerable groups has also been presented here.

The importance of health has long been recognized in climate policy. Public health depends on safe drinking water, sufficient food, secure shelter, and good social conditions. A changing climate is likely to affect all of these conditions. But with planned adaptive strategies, a lot of its adverse impact can be mitigated and losses can be minimized.

Acronyms/Abbriviations

COP: Conference of Parties, DALY: Disability Adjusted Life Years, GDP: Gross Domestic Product, GLOF: Glacial Lakes Outburst Flood, IPCC: International Panel on Climate Change, LDCs: Least Developed Countries, MDG: Millennium Development Goals, NOAA: National Oceanic and Atmospheric Administration, United Nations Framework Convention on Climate Change, World Health Organization

Introduction

The intergovernmental Panel on Climate Change (IPCC) is a leading international scientific body under the auspices of the United Nations (UN). It reviews and assesses the most recent scientific, technical and socio-economic information produced worldwide relevant to the understanding of climate change.

The recent Fifth Assessment Report (AR5) of IPCC working group has prepared a summary for policy makers. In his opening presentation at the COP19, the IPCC president showed that the current trends in Earth System, carbon cycle including ocean acidification will lead to continuing – and more severe – climate change. The changing climate will inevitably affect the basic requirements for maintaining health: clean air and water, sanitary environments, sufficient food and adequate shelter.

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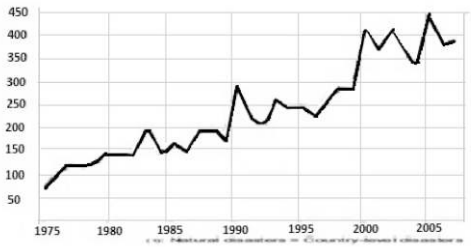
Climate Change

The climate is changing and human health is being affected directly and indirectly by this change. The impacts of climate change on human health are not same in all regions of the world. Least Developed Countries (LDCs) and countries where core health determinants are threatened by changing climatic conditions are recognized as most vulnerable to negative health impacts of climate change. As per the IPCC Report 2014, the communities of these countries are already burdened with world's most prominent climate sensitive health challenges, such as malaria, diarrhoea, and malnutrition. Health is a cross-cutting issue for development and poverty alleviation. The health systems of most of the LDCs are not prepared for increased burdens of disease and emergencies. The significance of these predisposing factors now make adapting public health policy and measures a priority sector critical for human development.

To protect the health of the most vulnerable people from the impacts of climate change, core public health infrastructure and services must further enable equitable access to underlying determinants of good health. Both horizontal and vertical policy integration of strategic and informed adaptive measures will be required at the community level to achieve results.

Between 1960 and 2007, extreme temperature events have increased 25-fold, followed by a 10-fold increase in floods, a 4- fold increase in storms and a 2-fold increase in droughts. 83% of all people affected by droughts, 97% of all people affected by flood, and 92% of all people affected by storms over the period 1960—2007 resided in the East Asia and Pacific and South Asia regions.

Figure 1 Number of natural disasters between 1975 and 2005



Climate and weather extremes are also manifested through food insecurity, social disruption, population displacement, and favour communicable diseases. Climate change may be responsible for hazards as diverse as heat waves and cold spells, smog and wildfires and other events also. Major natural catastrophes in 1990s, on an average, alone caused economic losses of US$ 66 billion a year at 2002 prices, caused either physically or through loss of property or livelihood. Economic losses from flooding in the South and South East region, estimated to exceed $300 billion from 1960 to 2008, represent resources diverted from productive investments, compromising progress toward the Millennium Development Goals. Mental disorders are the consequences of economic losses and/or bereavement. In Sri Lanka 62% of the industrial units are located on coast, more than 70% of tourist infrastructures are coastal and the coastal zone accounts for 43% GDP. Loss of income from tourism in Sri Lanka and Maldives will jeopardise the present rate of development and will also affect attainment of health goals.

More than 600 million people living in South Asia with <US$ 1.25/day/person income are the ones who would suffer the most from the climate vagaries. Changing precipitation patterns, rising annual mean temperatures, melting glaciers are going to put about 1.5 billion South Asian population out of the 6 billion global population, in serious survival problem. Out of 16 most climate vulnerable countries globally 10 are in Asia.

National Oceanic and Atmospheric Administration (NOAA) of the USA in its report suggests that climate change is "largely irreversible for 1000 years," with permanent Dust Bowls around the globe. The irreversible precipitation changes have hit the U.S. Southwest, Southeast Asia, Eastern South America, Western Australia, Southern Europe, Southern Africa, and northern Africa.

Environment Related Health Problems

Glacial Lakes Outburst Flood (GLOF) events in the past have occurred with colossal economic loss in Bhutan and Nepal. Continued glacier retreat in one hand and intensification of monsoon rains elsewhere will create variability in river flow in the highlands of the sub-continent. Himalayan glaciers feed 7 major Asian rivers, ensuring a year-round water supply for two billion people. Glacial retreat, therefore, will create water stress in the region. Since 1977 monsoon duration has become shorter due to late onset and early withdrawal and the strength of monsoon has also decreased in Himalayas. By and large precipitation nevertheless, became spatially variable globally. Floods will destroy habitats and will cause death and injury and together with drought will damage crops leading to malnutrition and further poverty.

Measured on a country by country basis, the water target of MDG (goal 7, target 10) will be missed by 234 million people, with 55 countries off track. The sanitation target will be missed by 430 million people, with 74 countries off track globally. On top of this, because of the human influence, more than 70 % of the surface water and about 50% of the groundwater has been polluted globally already.

Rainfall patterns and storms influence the transport and distribution of infectious agents, as temperature affects their growth. The World Health Organization (WHO) reports that climate-sensitive marine biotoxins cause poisoning of scombroid fish, shellfish and ciguatera, thereby affecting human life too. Waterborne diseases, such as diarrhoeal disease, are also influenced by El Niño. Correlation has been found between annual rainfall and the number of rainy days with the incidence of malaria.

Close to half of all people in developing countries suffer at any given time from a health problem caused by water and sanitation deficits. Twenty four per cent of global disease burdens and 23% of all deaths can be attributed to environmental factors. Children < 5 years of age bear > 40% of this burden. The World Health Organization estimates that improving the water supply would reduce the diarrhoeal morbidity rate by 21%, and improving sanitation would reduce the rate by 37.5%. There are socio-economic implications also that are related with water, e.g. 443 million school days each year are already lost due to water-related illness, which leads to poverty in adulthood.

Water borne diseases account for 60 million disability-adjusted life years (DALYs) lost each year, or 4% of the global total. According to WHO however,

diarrhoea is responsible for 73 million DALYs, acute respiratory tract infection for 95 million DALYs, malnutrition for 39 million DALYs and neglected tropical diseases for 19 million DALYs. All of which directly or indirectly are related with sanitation. Seventy percent of the deaths of children (aged 0-4 years) worldwide are due to diarrhoeal illness, acute respiratory infection, malaria, and immunizable diseases. Food-borne diseases account for an estimated 76 million illnesses, 325,000 hospitalisations, and 5,200 deaths in the United States alone each year. At least three million children under the age of five die each year globally due to environment-related diseases such as diarrhoeal disease and acute respiratory diseases. Over a million people die from malaria each year and two thousand million people are at risk from waterborne and food borne diarrhoeal diseases. Insect vectors breeding in water transmit malaria (267 million infected), filariasis (90 million infected), onchocerciasis (18 million infected), and dengue fever (30-60 million infected every year).

World Bank suggests that reduced exposure to environmental health risks could result in economic savings equivalent to as much as 3.5% of the GDP. It also suggests that the diarrhoeal disease caused by inadequate access to safe water, lack of sanitation and poor hygiene may contribute up to 10% of the total burden of disease.

Increased frequency and duration of severe heat waves and humid conditions during the summer is likely to increase the risk of mortality and morbidity, principally in the old and urban poor populations. High temperatures and poor urban air quality could contribute to widespread heat stress and smog induced illnesses in urban populations besides fall in agro outputs.

The management of heat stress conditions however, is laced with the lack of a definition of vulnerability to heat stress, lack of community based data, poor understanding of what might be the triggering temperature, lack of a standard diagnostic criteria and capacity to diagnose heat stress with a lead time, lack of scope to report heat stress in the present routine reporting forms, ineffective practice of measuring temperature and rainfall, absence of supportive policy and strategy and training to the health staff. Also there is no medically usable definition of heat wave.

World Health Organization (WHO) estimates that the warming, that has already occurred in the past 30 years, is responsible for over 150,000 deaths annually and 5 million DALYs due to increasing rates of mortality and morbidity from extreme heat, cold, drought or storms; significant changes in air and water quality; and changes in the ecology of a wide range of microbial diseases. Many of these deaths occur in low-lying coastal areas and small island nations, which are especially at risk from sea-level rise, storms, and microbiological threats in the ocean. In general, vulnerability to climate impacts is a function of societal characteristics in combination with climate, geographic, and other phenomena. Climate change kills about 315,000 people through hunger, sickness and disasters annually. This will probably rise to half a million by 2030. Climate change seriously affects 325 million every year and this will be doubled in 20 years, i.e., 10% of the global population. Economical loss, which is about $125 billion per year, on the other hand, is expected to rise to 325 billion.

Climate Change: Risks to Health

There is now widespread agreement that current trends in energy use development and population growth will lead to continuing –and more severe– climate change. The changing climate will inevitably affect the basic requirements for maintaining health: clean air and water, sanitary environments, sufficient food and adequate shelter. Many diseases and health problems may be exacerbated by climate change.

Each year, approximately 1.2 million people die from causes attributable to outdoor urban air pollution, 2.2 million from diarrhoea, largely resulting from lack of access to clean water supply, sanitation and poor hygiene, 3.5 million from malnutrition. Approximately 60, 000 people die in weather-related disasters, from heat waves, to floods and drought, in developed and developing countries alike. A warmer and more variable climate threatens to lead to higher levels of some air pollutants, increased transmission of diseases by unclean water, contaminated food, insect vectors and rodents, compromised agricultural production in some of the least developed countries, and increased hazards of extreme weather.

Relationships between Weather/ Climate and Health Outcomes

A clear understanding of the relationships and sensitivity of health outcomes and determinants to weather and climate patterns is essential when determining the risks that climate change poses to population health. These analyses, often referred to as sensitivity analyses, should describe current vulnerability at the geographic scale and level of detail that is most suitable for decision makers, taking into consideration the type and quality of evidence. In some cases, quantitative data are not available or even needed to describe these relationships. The burden of the chosen health outcome can be estimated using expert judgment and described in relative terms (e.g. there is a high burden of endemic malaria in a particular district, or there is a medium risk of epidemic malaria in another). At a minimum, analyses should be conducted of the relationship(s) between health data and core weather variables, such as temperature, precipitation,

Table 1: Climate-Sensitive Health Outcomes and Particularly Vulnerable groups

Climate-Sensitive Health Outcome	**Particularly Vulnerable Groups**
Heat stress	Elderly, chronic medical conditions, infants and children, pregnant women, urban and rural poor, outdoor workers
Air pollution	Children, pre-existing heart or lung disease, diabetes, athletes, outdoor
Extreme weather events	Poor, pregnant women, chronic medical conditions, mobility and cognitive constraints
Water- and food-borne diseases	Immunocompromised, elderly, infants; specific risks for specific consequences (e.g., Campylobacter and Guillain-Barre syndrome, E. coli
Vectorborne and zoonotic diseases	
Malaria	Children, immunocompromised, pregnancy genetic (G6PD status), non-immune populations
Dengue	Infants, elderly
Other	Poor, children, outdoor workers, others

relative humidity, and extreme weather events and patterns. Health data are generally available from the Ministry of Health, and weather data from the national meteorological and hydrological services.

Climate Change and Sustainable Development

Reducing greenhouse gas emissions and carbon foot print in health care facilities such as energy, environmental improvement through safe disposal of medical waste and safe water supply and transport can all result in health co-benefits. To achieve this, there are basic steps the health sector can take from improving hospital design to reducing and sustainably managing waste, using safer chemicals, sustainably using resources such as water and energy, and purchasing environmental-friendly products.

Health is a precondition for all three dimensions of sustainable development. The importance of health has long been recognized in climate policy. The UNFCCC treaty aims to avoid "adverse effects" of climate change, which it defines as "changes in the physical environment or biota resulting from climate change which have significant deleterious effects on the composition, resilience or productivity of natural and managed ecosystems or on the operation of socio-economic systems or on human health and welfare". Surveys from around the world show that the general public place health threats at or near the top of their list of climate change concerns, and over 90% of the National Adaptation Programmes of Action for climate change developed by the Least Developed countries identify health as a sector that will suffer adverse impacts of climate change. Despite this, the issue is currently neglected in the climate change mechanisms. A recent WHO review concluded that less than 3% of the international funding on climate change adaptation has been directed to projects with the specific aim of protecting health. The health co-benefits of climate change mitigation are omitted from almost all of the economic models that aim to guide decision-making on greenhouse gas emission reduction, leading to a bias against more sustainable and greener decisions.

Public health depends on safe drinking water, sufficient food, secure shelter, and good social conditions. A changing climate is likely to affect all of these conditions. The health effects of a rapidly changing climate are likely to be overwhelmingly negative, particularly in the poorest communities.

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Neighbourhood Development and Illness Differential in Rural India: Are they Interlinked?

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Abstract

The neighbourhood is a person's immediate residential environment, having both physical and social characteristics. Based on these characteristics, various studies across the world have established the relationship of different health outcomes with neighbourhood development. However, in India the links between neighbourhood development and health differentials have not been adequately studied. In this context, the present study tried to examine the effect of neighbourhood development on the health of children and the differentials across social groups in rural India using data from the India Human Development Survey (IHDS). The level of neighbourhood development was measured through the neighbourhood development index using the factor analysis technique. The differential was analysed through bivariate analysis using the chi square test of significance. The results show illness is inversely related to neighbourhood development and the same relationship has been found across the social groups, except in ST children. Delineating development on physical characteristics and social capital and their relationship with illness differentials, physical characteristics reveal much variation in illness in social groups like Others and OBCs whereas social capital responses are more among SC and ST for differentials in reporting illness. The study concludes that concern about development of the neighbourhoods should be more in the areas where poor people live and physical infrastructural development should be given priority.

Acronyms/Abbreviations

IHDS: India Human Development Survey, NCAER: National Council of Applied Economic Research, NDI: Neighbourhood Development Index, NFHS: National Family Health Survey, NPDI: Neighbourhood Physical Development Index, NSCI: Neighbourhood Social Capital Index, NSS: National Sample Survey, OBC: Other Backward Class, SC: Scheduled Caste, ST: Scheduled Tribe, VHI: Village Health Index, VPCI: Village Physical Connectivity Index, VSAI: Village Services and Amenities Index, VSII: Village Social Institution Index, VTCI: Village Trust and Cohesion Index

Background

In health research, the effect of various individual, household and community characteristics on health outcomes and healthcare behaviours have been studied widely. Their linkages are strengthened in many studies in varying degrees and the magnitude of their effect is a catalyst of health inequality. It has also been found applicable in India. Among the established factors of health inequality or differentials is caste as a social construct, which show both social and economic holdings of an

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individual. It is one of the major determinants of social inequality in India (Mishra, 2006). Other than individual factors and social gradients of health disparity, the place where one lives also plays an important role. Worldwide, mainly in developed countries, the component of place was added to health research in the 1980s to address health inequality within the framework of neighbourhood effect.[1] Research on neighbourhood effect has come a long way over the past decade (Pickett & Pearl, 2001) to conclude that place of residence is important in determining health inequality. Neighbourhood effect explains differences in individuals' health linked with development and quality of the neighbourhood (Kawachi & Berkman, 2003) other than individual and household characteristics.

The place effect may be understood by the development of place embedded into development of various infrastructure, amenities and services. On the social aspect, various forms of social cohesion, network, bonding, participation and interaction may also lead to development at the grass root level. All these could be studied within the framework of neighbourhood development and linkages with health status but have not been studied from the said perspective in India and thus, require attention. It is possible that physical and/or social development could improve the health of individuals. In a country like India where individual is rooted in a caste group and there is much diversity in development among the various castes. In India, caste effect on health differentials have been strengthening according to various studies (Nayar, 2007). However, the effect of neighbourhood development on health outcomes within the nexus of caste is still unexplored. Against this backdrop, the present study tries to examine the effect of neighbourhood development on health outcomes across the social group in rural India. This study acknowledges the fact that the caste structure is more volatile in rural areas than in urban areas.

Context of Neighbourhood and Effect on People's Health

Neighbourhood is a person's immediate residential environment, having both physical and social characteristics. The words area, locality and place have also been used interchangeably for the same. More precisely, a neighbourhood is a combination of attributes of the place (contextual) and the people (compositional) living there (Blackman, 2006). The theoretical aspect of neighbourhood is linked with the development of a place at the aggregate level on both physical and social characteristics to make them affluent or poor. However, the inclusion of different characteristics to measure neighbourhood development is a widely debated issue having major methodological flaws. The availability of various infrastructural indicators, services and amenities in the area is included under physical characteristics whereas social characteristics include social trust, belief and cohesions among individuals as well as availability of social institutions and individual participation in them. It has been argued that the availability of social institutions contribute significantly in shaping social characteristics within a community (Putnam, 1993). These characteristics have been well studied in various disciplines under the notion of social capital. However, each discipline has its own definition.

Over the last decade, various studies measured neighbourhood effect upon people's health on economic, physical and social characteristics. The studies concluded that the people living in deprived areas have worse health status (Wilson, 1987; Malmstrom et al, 1999; Deiz-Roux, 1998; Diez-Roux et al, 2001; Pickett and Pearl, 2001; Kriegar et al, 1993; Subramanian et al, 2003). Haan et al (1987) postulated the inverse relationship of social and physical environment with excess mortality independent of individual characteristics. Further, a wide range of evidence reveals social characteristics as a strong catalyst in shaping health and the independent effect of material deprivation on people's health (Putnam, 2000; Poortinga, 2006). Studies[2] to establish neighbourhood effect on health found significant effect on various health outcomes (Pickett & Pearl, 2001) strengthening the concept of neighbourhood effect on health. However, studies have found that poor neighbourhoods are systematically disadvantageous to their residents, isolating them from opportunities to improve their health status (Wilson, 1987). In addition to that, it has also been established that neighbourhood matters for specific population groups and varies with age, caste, class and so on (Kawachi & Berkman, 2003).

Methods & Materials

Data Source

The study uses India Human Development Survey (IHDS) data jointly collected by NCEAR and University of Maryland in 2004-05 from 1,503 villages across 33 States and Union Territories of India. Although the National Sample Survey (NSS) and National Family Health Survey (NFHS) provide data on various health indicators nationwide, they do not provide data on place/area/locality (neighbourhood) characteristics. However, the second round of NFHS in 1998-99 collected data on some characteristics of place but are scanty and older than the IHDS data. Further, IHDS data quality and national representation is near to NSS and NFHS findings (Desai et al, 2010).

Analytical Framework

The central argument of the study is to examine the effect of neighbourhood development on health outcomes, specifically, childhood illness. The village has been considered as a neighbourhood and development based on selected physical and social characteristics of neighbourhood is termed as neighbourhood development. It is assumed that availability of particular characteristics within or near the neighbourhoods will reflect high level of neighbourhood development and with increase in distance; the relative advantage will reduce and have an adverse effect on neighbourhood development. On the health front, this study has hypothesised that level of neighbourhood development will have an inverse relationship with health outcomes irrespective of the socioeconomic characteristics of the individual and household. It may also be possible that a change in one of the indices of neighbourhood development may have an effect on health outcomes and on the development of other indices of neighbourhood development.

Neighbourhood development is an aggregate index of village development on physical and social (social capital) characteristics. For generation of the index, the factor

analysis technique has been employed. Factor analysis technique reduces the number of variables. On health outcomes, childhood illness among children up to the age of five years is considered. Childhood illness includes any incidence of fever, acute respiratory infection and diarrhoea in the last two weeks of the time of the survey. Further, to observe differentials in childhood illness, caste has been considered as a social construct that determines the social and economic status of an individual in a village. The bivariate analysis using the chi-square test has been done to understand the significance of the association of caste differentials in illness across the neighbourhood. It is important to note here that throughout the study, the terms caste group and social group have been used interchangeably as per appropriateness. The Government of India's classification of caste into Scheduled Caste (SC), Scheduled Tribe (ST), Other Backward Classes (OBC) and Others is followed throughout the study.

Selection of Neighbourhood Variables to Construct Neighbourhood Development Index

Neighborhood development is based on the physical and social characteristics of a village. Based on physical characteristics of place, the Neighbourhood Physical Development Index (NPDI) and on social characteristics, the Neighbourhood Social Capital Index (NSCI) is constructed. In a neighbourhood, all the variables related to neighbourhood physical development is directly related to proximity to the village. Here, neighbourhood physical development index an aggregation of village physical connectivity, village health facility and village services & amenities indices. Neighbourhood social capital is combination of village trust and cohesion and, village social institution indices (Figure 1). Village trust and cohesion is opposite of conflict among the people residing within the village and if it is not so, this study has assumed that there will be cohesion, interaction and trust among them.

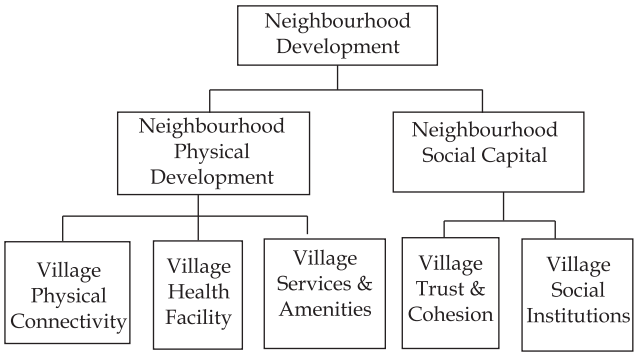


Figure 1: Flow diagram of characteristics of neighbourhood development

Construction of Neighbourhood Development Index

Construction of Neighbourhood Development index (NDI) is a three steps process.

Step I: Factor scores is generated for each set of variables separately using scores of factor loadings generated through the factor analysis technique and then aggregated into indices composite score.

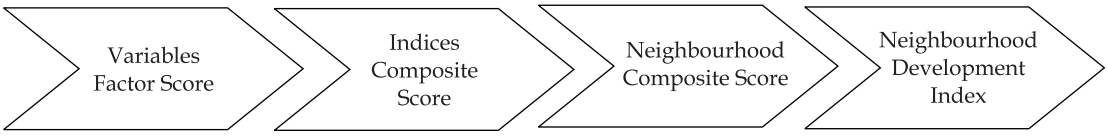


Figure 2: Steps include in construction of neighbourhood development index

Step II: Again, the factor analysis method is employed on the composite score of five different indices.

Step III: The factor score is aggregated, which was generated in the previous step.

Applying the same process, the NPDI and NSCI have been constructed and categorised into low, medium and high neighbourhood physical development and neighbourhood social capital. Using composite scores of village physical connectivity, health facility, village services and amenities, village trust and cohesion and village social institutions the Village Physical Connectivity Index (VPCI), Village Health Index (VHI), Village Services and Amenities Index (VSAI), Village Trust and Cohesion Index (VTCI) and village social institution index (VSII) has also been constructed.

Result of the Study

Neighbourhood Development and Short Term Morbidity in Rural India

Studies from various countries across the world have found linkages between health status and development of place under the notion of neighbourhood effect and this study has tried to analyse the same in the Indian context. Table 1 shows the pattern of illness among children until the age of five years and the association with the level of neighbourhood development. It shows that as the level of neighbourhood development increases, the incidence of illness decreases. However, it varies from around 30 per cent in low developed neighbourhood to 26 per cent in highly developed neighbourhood. Considering neighbourhood development on physical and social characteristics separately, rate of morbidity shows difference of 5 per cent between high and low development on physical characteristics whereas it is around only one per cent in low and high social capital.

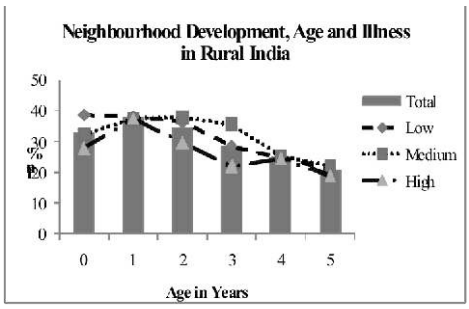
Table 1: Neighbourhood Development and Illness in Rural India (%)

	NPDI	NSCI	NDI
Low	31.0_a	29.3	30.1_a
Medium	31.0_a	28.5	31.0_a
High	31.0_a	28.2	31.0_a
Significance Level: a>0.005, b>0.01, c>0.05			

Source: Author's calculation based on IHDS data

Neighbourhood Development, Children's Age and Short Term Morbidities

Table 2 depicts the age pattern of illness at different levels of neighbourhood development. The highest incidence of illness is at the age of one year and lowest at five years. There is a difference of almost 12 per cent in the incidence of illness between ages of below one and five years (Figure 1). When considering the first year of age, the difference is almost 18 per cent. High rate of morbidity at the age of one year compared to age below one year might be due to age heaping.



Graph:Neighbourhood Development and Illness Differentials

Figure 1 shows that poorly developed neighbourhoods have vast differences in prevalence of illness across the ages compared to medium and high developed neighbourhoods. This difference is around 18 per cent in low developed neighbourhoods for ages below one year and five years as against of 10-12 per cent in medium and high developed neighbourhoods. On the other hand, for the same age, there is much variation in illness reporting within different levels of neighbourhood development. It is higher at early ages and as the age increases, the difference in illness reduces at different levels of neighbourhood development. At age below one year, there is a difference of almost 11 per cent between low and highly developed neighbourhoods as against 2 per cent only at the age of five years. However, no consistent pattern was found for all ages in the rural areas of India (Table 2).

Table 2: Neighbourhood Development, Age and Illness Differentials in Rural India (%)

Age	Low	Medium	High	Total	Difference*
0 Year	38.7_a	32.3_a	27.8_a	32.6_a	10.9
1 Year	37.9	37.4	37.5	37.6	0.4
2 Year	36.2_b	37.8_b	29.5_b	34.4_b	6.7
3 Year	28.4	35.5	21.8	28.4	6.6
4 Year	24.8	25.1	24.4	24.8	0.4
5 Year	21.0	22.0	18.8	20.7	2.2
Total	30.1_a	31.3_a	26.1_a	29.1_a	4.0

Significance Level: a>0.005, b>0.01, c>0.05.
*Difference in morbidity rate between low and high developed neighbourhood.

Neighbourhood Development and Caste Differentials in Morbidity

Linkages of neighbourhood development with illness prevalence analysed in previous section were found to be significant and inversely linked. This section extends those linkages across the social groups (Table 3). Across the social group, illness varies from 20 per cent among OBC children to around 23 per cent among ST children. We assume that poor people will have high rate of child morbidities but Table 3 delineates opposite direction of the morbidity pattern. This is not uncommon because reporting of any ailment as an illness depends on perception and recognition on the one hand and the capability to seek treatment on other hand (Raushan & Muthrayappa, 2014).

Table 3: Neighbourhood Development and Social Differentials in Rural India (%)

Level of ND	In %			
	Others	OBC	SC	ST
Low	32.6_a	28.7_b	32.2_a	17.9
Medium	30.8_a	33.0_b	31.8_a	23.8
High	23.4_a	28.9_b	25.0_a	22.7
Total	29.0_a	30.1_b	29.8_b	22.5
Significance Level: a>0.005, b>0.01, c>0.05.				

Source: Author's calculation based on IHDS data

Barring ST children, social differentials in illness show an inverse relationship with the level of neighbourhood development. Likewise, in a low developed neighbourhood, the incidence of illness among ST children is around 18 per cent and it increases to around 23 per cent in highly developed neighbourhoods. Among Others and SC children, a sharp difference has been found in incidence of illness between low and high developed neighbourhood of around 9 per cent and 7 per cent respectively.

Table 4: Neighbourhood Development on Physical Characteristics and Social Capital, Caste and Illness in Rural India

	Others		OBC		SC		ST	
Low	34.4_a	28.6	29.5_a	29.1	30.0_b	31.4_b	18.5	25.9
Medium	26.3_a	28.0	33.7_a	29.8	30.5_b	30.2_b	18.5	22.2
High	25.6_a	27.7	26.4_a	30.4	26.6_b	26.9b	24.2	21.7
Significance Level:a>0.005, b>0.01, c>0.05. *NPD: Neighbourhood Physical Development, NSC: Neighbourhood Social Capital								

Source: Author's calculation based on IHDS data

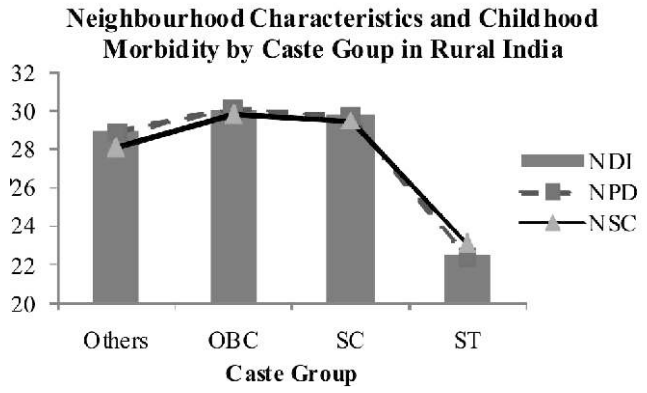
When considering low and medium developed neighbourhoods, the difference in incidence of illness is meagre as against the difference between medium and highly developed neighbourhoods across all social groups, with some exceptions.

Neighbourhood Characteristics and Illness Differentials across Caste Groups

This section extends the linkages of illness differentials across caste groups considering neighbourhood development of physical characteristics and social characteristics/capital separately. The development of physical characteristics and neighbourhood social capital has an effect on child health in the same way across all the social groups. From Figure 2, it is very clear that both the components of neighbourhood development do not show much variation in incidence of illness. It can be stated that a neighbourhood with good aggregate physical development will also have good aggregate social capital. However, it may depend upon or vary with the indicators used to measure physical development and social capital of a neighbourhood.

Neighbourhood physical development (NPD) and neighbourhood social capital (NSC) at the aggregate level do not show much variation in illness across different caste groups. The different levels of development, however, result in much variation in illness rate and this can be seen in Table 4 very clearly. Considering neighbourhood physical development first, illness differentials were found to be high in physically poor neighbourhoods among all the social groups except for ST and it reduces with development of physical characteristics of the neighbourhood. However, among STs, illness was

Graph 2: Child morbidity across Caste by Neighbourhood Characteristics in Rural India (%)



*NDI: Neighbourhood Development Index, NPD: Neighbourhood Physical Development, NSC: Neighbourhood Social Capital

positively linked with NPD. Moving on to neighbourhood development on social characteristics, not much variation was found among Others and OBC but it mattered more for poor social groups like SCs and STs where a difference of more than 4 per cent was found with low and high NSC. An interesting point to note here is that among STs, illness increases with increase in level of physical development of neighbourhood whereas with social capital it reduces with increase in level of neighbourhood development. It may be possible that among STs, social capital is more cohesive and strong, and not dependent on physical or infrastructural development of the place. However, it is also important to add here that among rest of the caste groups the development of one feature was found linked with the development of another.

Conclusion

Neighbourhood development considering village as a neighbourhood reveals the fact of dependency and inter-linkages of availability of one service or amenity or another service or amenity contribute to overall development of a village. The availability of health sub-centres and primary health centres was found to be highly correlated where community health centres were found linked with district hospital in rural India. Even private healthcare facilities were found located near community health centres or district hospitals as these are facilities that are established in towns or near semi-urban areas. The different private healthcare facilities with untrained doctors located around the villages are not the part of our concept of neighbourhood development for the purpose of this study. We also found that other public infrastructural services like banks, STD kiosks, markets, distance from pucca road, bus stop, town etc., are inter-linked. On social characteristics like availability of village social institutions play an important role in building trust and cohesion among residents and contribute more towards neighbourhood development. We developed a neighbourhood physical development index and neighbourhood social capital index based on selected physical and social characteristics. It was also found those neighbourhoods with developed physical characteristics are contributing more to development of social characteristics.

Linkages of illness differentials with neighbourhood development and caste also shows that poorly developed neighbourhood have high incidence of illness and as the level of development of village or neighbourhood increases, the rate of illness decreases. The age pattern of illness shows rapid decline in illness with increase in age across highly developed neighbourhoods compared to low or medium developed neighbourhoods. The Caste composition shows that the highest incidence of illness is among Others and is lowest among ST children in low developed neighbourhoods. In highly developed neighbourhoods, the opposite situation prevails. It is interesting to add here that the physical development of villages matters more than development of social capital. However, it is social capital that matters more for poor caste groups like SCs and SCs compared to Others and/or OBCs. This study concludes that neighbourhood development is important for well-being of people apart from caste-based differentials in health outcomes as has been strengthened by other studies. Concern over neighbourhood development should be more in the areas where poor caste people reside and on physical and/or infrastructural development.

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Occupational Disease among Mineworkers – Case Study of Silicosis in Rajasthan

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Abstract

The entire discourse on Occupational diseases like Silicosis, Asbestosis, Byssinosis or Coal workers' pneumoconiosis affecting mineworkers, has been more from the medical perspective than that of the patient. The attempt here is to highlight the living reality of Silicosis, the struggle for diagnosis, the trauma of those diagnosed, the response of the State and the impact on the family of mine workers, who are mostly illiterate and often succumb to one or the other occupational diseases without ever being diagnosed. Rajasthan is known for its forts and tales of valiant warriors and the beauty of the desert. However, behind the royal finery and glitz, one can see the mines and quarries and the millions of impoverished workers digging their way to death – coughing and gasping for breath. This paper is an attempt to bring those unheard voices, muffled till now by the rustling of silk, horse hooves and political brouhaha.

Acronyms/Abbreviations

DGMS: Directorate General of Mines and Safety, DOTS: Directly Observed Treatment, Short-Course, IEC: Information, Education and Communication, ILO: International Labour Organization, MLPC: Mine Labour Protection Campaign, NHRC: National Human Rights Commission, NIMH: National Institute of Miners' Health, OD: Occupational Diseases, TB: Tuberculosis, WCA: Workmen's Compensation Act, WHO: World Health Organisation

Introduction

According to World Health Organization, "Silicosis, one of the oldest occupational diseases, still kills thousands of people every year, everywhere in the world". Silicosis is a progressive, disabling lung disease caused by breathing dust containing particles of crystalline silica—particles so small that one can see them only with a microscope. The cause of silicosis has been known for centuries—the earliest cases of silicosis were recorded before the first century—yet workers continue to die every year from the disease. Though silicosis shows no symptoms at first, the victim eventually has trouble breathing and develops a severe cough.

Mineworkers working in the Sandstone mines and quarries of Rajasthan are exposed to the Silica dust and susceptible to Silicosis. Women and men suffer when they work in the mines and quarries, and children play around while their parents' work or, live around them – their villages covered with the fine silica dust. In Jodhpur district 987 cases of silicosis are registered with the government hospital whereas in

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Karauli district almost 300 mineworkers have been diagnosed with silicosis by National Institute of Miners' Health (NIMH) in 2012-2014. To quote from the Report of the Working Group on Occupational Safety and Health for the Twelfth five year plan (2012 to 2017), Government of India, Ministry of Labour and Employment, August 2011, "The ILO/WHO Global Programme on Elimination of Silicosis proposes to eliminate silicosis by 2030 as an occupational disease and has suggested that every country should have a national elimination programme. In view of the directions from the Supreme Court and recommendations and monitoring by National Human Rights Commission, it is necessary that a concerted effort in the form of a national programme for elimination of silicosis is formulated and implemented. It is also high time that the government takes initiative in formulating a national plan for prevention and control of silicosis and asbestosis in India so that the objective of the WHO to eliminate silicosis by 2030 is achieved."

The Mines and Quarries

The mines and quarries in Rajasthan where the workers toil are difficult to imagine for most people. As one walks or drives through the metalled road that connects the villages in a district, in the distance one can see the rising hillocks, sans any vegetation. A closer look will reveal that they are heaps of rubbles or tailings from the earth that has been dug out, exposing layers and layers of earth sometimes upto 300 feet. Surrounding the hillocks are huge manmade craters that are largely open pit mines and quarries. They can be small quarries, 50 metres by 50 metres in area or large mines of 5 hectares – but usually seen as a huge crater where it is difficult to say where one mine ends and another begins. As far as the eyes go, not a single patch of green is visible. Occasionally, a lone tree maybe standing precariously as the ground beneath it has been almost dug out. There are no shed in the mines to provide respite from the harsh desert sun, just as there is no toilet or any source of drinking water, apart from an earthen pot placed by some thirsty mineworker for the benefit of all. Some mines will have an earth remover (which in common parlance is known as JCB, the company that makes them) or a tractor that is commonly used to transport the stones. The other machinery is the dreaded drilling machine that causes the cloud of dust hanging over the mines. The workers toil all day in the sun working with bare hands and feet, using hammer and chisel to break the huge slabs of stones from the surface of the earth. These days they use Chinese made chemical – sinocrack, a white powder that is mixed with water to make a paste. Then holes are drilled and the paste is applied along the fault lines. After a few hours the surface cracks and the worker hammers out the blocks. It is a new menace, which causes the skin to peel and irritation in the eyes of the workers.

The minor mineral mines are largely private owned, often run by politically well connected families who are from the upper castes, and employ around 10 to 30 workers from among the Dalits, depending on the size of the mine. The men are unskilled workers or have acquired skill through the number of years that they have been working. Most start to work as early as age 10 and typically earn the most during their late teens and 20s. Since it is daily wage labour or piece rate, in their prime of youth they can earn well. By their 30s, they start getting weak and by early 40s, the toil takes a toll

on their health and thus productivity and earnings fall. These are mine workers working in the silica based minor minerals like sandstone, soapstone. Production mechanisms are as archaic as the profession itself. Largely manual processes using hammer and nail. None have any gloves or even slippers; no mask to save them from the fine silica dust that causes the painful and incurable disease, silicosis. Women work as loaders, or use their bare hands to clear the rubbles. The workers have no identity, no proof of employment, no bank accounts, no social security, and no job security. In Rajasthan alone, there are 2.5 million mineworkers (information given by Department of Mines and Geology, Rajasthan). Of the total work force in mines, 95 per cent are SCs (Dalits) and STs (Adivasis), 37 per cent are women, and 15 per cent are children (India's Childhood in the "Pits", 2010). Together they help to generate the highest revenue in the country. Royalty Accrual for Minor Minerals in 2009-10 is one of the highest in Rajasthan at INR 50277.05 lakhs as per the data provided in "Mineral Royalties" issued by Controller General, Indian Bureau of Mines, Nagpur, January 2011. Yet their voices are buried under years of caste oppression and hence their conditions remain as vulnerable as ever.

As mentioned earlier, the worker who contracts silicosis is the lowest in the hierarchy. He or she is usually from the Meghwal community (schedule caste) or a Bhil (scheduled tribe). He/she has been working in the mines from an early age -usually at 13 years they start working to supplement the family income; illiterate with no other skills; and no land holding to fall back upon agriculture. Hence, they have no assets. Typically they have large families with 5 to 6 children on an average – the stigma of the girl child is high and the misplaced understanding that more children means more income since many more will be engaged in earning. Social occasions like weddings and funerals are expensive affairs. Added to this is the cost of treatment since a mineworker keeps falling ill with various ailments. Nutritious food in the desert state is expensive and thus immunity decreases over a period of time. Almost all of them suffer from Tuberculosis. Most women work till the end of pregnancy and get back to work within a month of delivery. In most instances, from the time children are born, they are exposed to silica dust, and in majority of the cases, they also join this profession, as they approach adolescence and their father succumbs to silicosis. Today the workers earn anything between INR 200 to INR 400 per day depending on what skill set they have. On an average, the worker works for about 20 days every month. He/she is not entitled to any leave, holiday or weekly off. He has no social security like medical insurance, pension or disability allowance. It is a hand to mouth existence. They are at the bottom of the social and economic pyramid.

The mineworker often does not know the mine owner for whom he works. Frankly, even the State Mining department cannot identify the mine owner because of the extensive proxy mining and illegal mining that takes place. Through a RTI, MLPC found out in July 2012 that of the 30,000 mining leases in Rajasthan, only 3706 mines are registered with the Directorate General of Mines and Safety (DGMS), Ministry of Labour and Employment. This means that almost 90% of the mines in Rajasthan are outside the purview of the Mines Act 1952 – one of the only acts that governs mines and

quarries in the country. Hence, typically the mineworker only knows his immediate contractor who has given him an advance to engage him in the mine and work as a daily wage labourer. There is no written document, and accounts are all maintained in registers that are with the contractor or mine owner, and where the mineworker gives his thumb impression every now and then.

Silicosis

One of the earlier studies conducted by MLPC around 2007, it revealed that there was a high percentage of indebtedness among the workers. Workers are forced to take loan from the mine owner for medical expenses. Their medical records revealed that they were suffering from the notified occupational disease – Silicosis. In another study undertaken by MLPC around 2008, it was noticed that 48% of the women workforce were widows. The husbands had all undergone treatment for Tuberculosis (TB) and in the false hope of getting cured; they had actually all succumbed to Silicosis.

What is Silicosis

"Silica, or silicon dioxide, is the predominant component of the earth's crust. Occupational exposure to silica particles of respirable size (aerodynamic diameter of 0.5 to 5μm) is associated with mining, quarrying, drilling, tunnelling and abrasive blasting with quartz containing materials (sandblasting). Silicosis is an occupational lung disease attributable to the inhalation of silicon dioxide, commonly known as silica, in crystalline forms, usually as quartz, but also as other important crystalline forms of silica, for example, cristobalite and tridymite. These forms are also called "free silica" to distinguish them from the silicates. The silica content in different rock formations, such as sandstone, granite and slate, varies from 20 to nearly 100%.

Exposure to Silica Dust and Contracting Silicosis

There are three main components of diagnosis:

1. Occupational history helps to differentiate silicosis from other dust-related diseases with similar symptoms and formation.
2. Radiographical images may reveal silicosis even when the patient is not suffering any obvious symptoms. Chest x-rays show the presence of nodules on the lungs which are 2-5mm in diameter, of the same density and usually symmetrical. Sometimes the nodules merge to form conglomerate shadows on the lungs, known as massive pulmonary fibrosis.
3. The patient is subjected to a pulmonary function test which measures their capacity for inhaling and expiring; if they have silicosis, a restrictive pattern of breathing is detected. The patient may also receive a sputum test for TB and other common secondary diseases of silicosis.

Tuberculosis (TB) and Silicosis

Tuberculosis may complicate all forms of silicosis, but people with acute and accelerated disease may be at highest risk. The link between silicosis and tuberculosis has been recognized for nearly a century. Active tuberculosis in silicotic workers may

exceed 20% when community prevalence of tuberculosis is high. Again, people with acute silicosis appear to be at considerably higher risk.

TB to Silicosis – Medical and Legal Ramifications

In India, most doctors are not trained in diagnosing Occupational diseases. As a result, when the mineworkers go to the primary health centres - their first contact point with a qualified medical practitioner, with symptoms of incessant cough, breathlessness and occasional fever, the doctor assumes the ailment to be TB. Given the low immunity of mine workers, they are also susceptible to this disease. Over the years (often for 5 years at a stretch) they undergo TB medication. They get temporary relief. Sometime it gets better, while often it worsens. During hospitalization they feel better since they are forced to live in discipline – proper food, no access to smoking or alcohol and continuous medication. Once back home they get back to work and the same hard life. They then try quacks; they try other private doctors and expensive medicines for some relief. While physiologically there is no improvement, economically they get poorer – no regular wage, rising debt for treatment and increasing frustration. In most cases the diagnosis remains as TB. It is this misdiagnosis that causes the problems because silicosis is incurable and notified occupational disease where the patient is entitled to compensation. A mineworker cannot approach any court of law when he contracts TB, but can approach the judiciary if suffering from Silicosis.

It has been estimated that out of 11 million cases of occupational disease in the world, 17% exist in India. The country is industrializing at a very rapid pace, one that is likely to continue for several decades. Failing to address occupational health and safety issues will lead to incalculable morbidity and absenteeism as a consequence of work-related health problems. This will undermine the productivity and competitiveness of industry, and gravely affect India's resolve to eliminate poverty.

Missing Numbers

Looking at the number of silicosis cases in the field, an RTI was filed to find out the number of silicosis patients. Though during the period 2005-2010, 987 cases of silicosis were registered with K.N. Chest hospital interestingly these cases were not reflected in the Report of the Working Group on Occupational Safety and Health for the Twelfth five year plan (2012 to 2017), Government of India, Ministry of Labour and Employment, August 2011, where upto 19.7.2011, they had compiled only 123 cases of Silicosis across the country since 1994 (page 32 of the Report).

Section 25 of Mines Act 1952 clearly states that any registered medical practitioner who diagnoses a patient with notified disease needs to immediately inform DGMS. However, as evident from the above discrepancy, the law has been violated by none other than government hospitals. No action has been initiated either by DGMS or the State against the doctors or hospitals for violating the Mines Act. For a mineworker to initiate proceeding is not practical since the penalty on the doctor is a meagre amount of INR 50 (the act is dated 1952) and the worker will have to spend at least 5000 rupees and many years for the court proceeding to be completed.

No Actual Access to Legal Rights

It is strange that a registry may be maintained for cancer and TB but not for Occupational Health Problems. Until and unless the problem of occupational disease is quantified, how can it be tackled? As mentioned earlier, mineworkers do not have any proof of employment. Moreover, when they approach a government hospital for treatment and even when it is noted that they are suffering from a notified disease like Silicosis, the government fails to report, and then it is double injustice to these hapless mineworkers. In most cases, when the patient felt a little better or they were about to die, the hospital discharged them – to avoid any liability or responsibility. In many cases, the patients or their kin were not informed about the disease they were suffering from, its incurable nature and progressive deterioration. Thus, the mineworker is denied of all labour rights when he is unable to access the legal system for compensation due to lack of documentary evidence; and his/her medico legal rights are violated when the health care system denies him of all information and is in a hurry to absolve itself from responsibilities. Mineworkers are excluded from Employee State Insurance Act or ESI and they cannot avail of Workmen's Compensation Act 1923 (WCA) since they do not have any documentary evidence of employment. Through an RTI filed by MLPC, it was revealed that in the last 10 years (2003-2013) not a single case under WCA was filed by a mineworker in Rajasthan. However, the Government feels there was adequate provision in this regard. On 13th July 2009, the Minister of Labour and Employment was questioned in the Lok Sabha about silicosis. He confirmed that there were adequate legislative provisions under the Factories Act, 1948 and the Mines Act, 1952 to ensure healthy working conditions and the prevention of silicosis. He said that the Workmen's Compensation Act, 1923 and the Employees State Insurance Act, 1948 dealt sufficiently with compensation and rehabilitation of affected workers.

Combating Occupational Disease – a path breaking model initiated in Rajasthan

The Rajasthan government displayed its understanding and set some trail blazers to tackle the problem of occupational diseases among mineworkers. The Rajasthan State Human Rights Commission, the Mining department, the State Labour department and the district administrations have been proactive as the below dateline mentions:

- 6th November 2009: MLPC files a complaint with National Human Rights Commission (NHRC) on the situation of Silicosis affected workers and demanding relief for the next of kin of those who have died.
- January 2010: In response to the MLPC complaint, NHRC team visits Jodhpur and meets the widows and those affected.
- 5th April 2010: NHRC orders Rajasthan to pay some monetary relief to next of kin of silicosis victims
- 27th September 2010: Government of Rajasthan paid an interim relief of INR 1 lakh only, to 21 people from the Chief Minister's Relief fund based on NHRC order
- 12th November 2010: NHRC, while hearing a complaint by Khedut Mazdoor

Chetna Sanghat, regarding working and health condition of workers from Jhabua District, Madhya Pradesh, working in quartz crushing factories of Bardoa, Kheda and Panchmahal in Gujarat, recommended that a sum of INR 3,00,000/- each be given to the next of kins of 238 deceased by the State Government of Gujarat. The Gujarat government did not comply with this order, but Rajasthan government did.

- 6th June 2011: Rajasthan government makes a further payment of INR 2 lakhs each to the 21 next of kin of silicosis victims, thereby the total relief amounting to INR 3lakhs – similar to the NHRC Gujarat order, again from the Chief Minister's Relief fund.
- 19th March 2013: Seven more widows get a Relief of INR 3 lakhs each, and this time from the Environment and Health Cess Fund (Rajasthan Environment and Health Administrative Board), and not from the Chief Minister's Relief fund.
- 6th August 2013: From one defunct Pneumoconiosis Board, state issues order to set up 6 Pneumoconiosis Boards across the State. It was further clarified that all mineworkers suspected of occupational diseases (OD) will be diagnosed by the Pneumoconiosis Board and the confirmed cases of silicosis or asbestosis will be provided with monetary relief of INR 1 lakh each.
- 11th September 2013: Rajasthan government decided that all monetary relief – INR 1 lakh for victims of Occupational Disease and INR 3lakhs for next of kin to those who succumbed to the disease will be institutionalized and paid from the Rajasthan Environment and Health Administrative Board (REHAB) that collects a mining cess.

Present Sitution

After the commendable work mentioned above, the government decided that all mineworkers who have been suffering from Silicosis or Asbestosis and were diagnosed prior to June 2013 would not be given any monetary relief of INR 1 lakh as had been the earlier practice, until and unless the Pneumoconiosis Board certifies them. This was decided by the Rajasthan Environment Health Administrative Board (REHAB) who collects a mining cess and there is a total budget receipt of INR 284.61 crore accruing under the Environment and Health Cess Fund (2008-09 to 2012-13) as against an expenditure of INR 69.67crore till date. In this expenditure, as on 30th May 2013 only INR 200 lakh were sanctioned, for monetary relief to occupational disease victims and their families. Of this, INR 122 lakh went unspent and INR 150 lakhs were granted for further expenditure in the year. This clarifies that REHAB has adequate funds and more than 50% of the allocated amount was unspent. MLPC has come across cases where the TB hospital (meant to handle Pneumoconiosis cases) discharged the mineworker affected with Silicosis to vacate beds, since it is an incurable disease and the person will any way die. Then the State constitutes the Pneumoconiosis Board and states that this Board will verify the Occupational Disease cases, both of living and those who have succumbed to it. The Pneumoconiosis Board refuses to certify cases of confirmed silicosis citing the argument, what if the patient committed suicide. Such illogical

reasoning, when one government hospital diagnoses an incurable disease and another state medical authority debates on the most absurd grounds. Further, this is contradictory since for similar cases, the State in the past has given monetary relief of INR 3 lakh each to the widows of silicosis and asbestosis victims.

There are hundreds of mineworkers who have been diagnosed with Silicosis and Asbestosis by the Pneumoconiosis Boards and have been waiting for a year to get the monetary relief.

No amount of complaints by the Mineworkers to the State Authorities and Rajasthan State Human Rights Commission has been able to make the Board functional. In such situation, the following questions are being raised by the mineworkers - how will the mineworkers obtain the certification from Board? What happens to them if they die waiting for the diagnosis and certification? It was due to state negligence that the Pneumoconiosis Board remained non functional for more than two decades.

This brings us to the cutoff date of death that the State wants to stipulate. For instance, widows in Jodhpur and Karauli received monetary relief of INR 3 lakhs each in 2012 and 2013, when there was no Pneumoconiosis Board. On what logic is the state denying the widows of today, even when competent medical authorities have confirmed the disease. For instance, in Jodhpur alone, KN Chest Hospital has confirmed and continues to diagnose Silicosis among 1000 mineworkers. The Pneumoconiosis Board in Jodhpur functions only twice a month, barely examines 50 patients. At this rate, all 1000 workers will die while waiting in the queue. Similarly, MLPC has submitted the list of 2000 former asbestos mine workers to the Udaipur District Collector where about 40 patients are examined a month.

Way Forward

The government in Rajasthan has taken tangible steps, but needs to go that extra mile to assist the mineworkers. Every Primary Health Care facility in the country and every government hospital in urban areas should have an ILO guideline trained physician to diagnose Occupational diseases like Asbestosis and Silicosis, to name a few.

National Institutes like National Institute of Miner's Health (NIMH) and National Institute of Occupational Health (NIOH) should take the lead. For instance, one of the Objectives of NIMH is: "To promote health and prevent occurrence of occupational diseases among persons employed in mines". Thus it should be mandated to spread awareness among every unskilled mine worker across the country on occupational diseases and measures to prevent it. They should also undertake training of doctors on ILO guidelines to enable them to diagnose Occupational diseases. This should be target driven and time bound. NIOH and NIMH should undertake it together. NIOH should take the lead role to honestly portray the hazards of the industry – be it asbestos or any other mining, since the "major objectives of the Institute and its centres are to identify and mitigate the occupational and environmental health problems in the country. The tools used for this purpose are research, education and information dissemination."

Researches should be undertaken and they should be pro-labourer and not pro-industry. They should also prepare simple and pictorial Information, Education and Communication (IEC) material for mineworkers (keeping in mind that they are mostly non-literates) to inform them on the effect of Mining on their health and preventive measures that the need to take.

Given the endemic nature of Occupational diseases, every PHC should be mandated to maintain an Occupational Health Registry, where along with other details, the occupation of the patient should be recorded. Thus, this will help in easy referrals and diagnosis. For instance, if a TB patient has been undergoing treatment under the DOTS programme and there has been no improvement for 6 months, then he/she should be referred for further diagnosis for Occupational diseases. Health Card should be issued for every worker that mentions his Occupation and regularly examines him/her for any ailment. Every medical college in the State should set up a Pneumoconiosis Board, where a 3 panel doctor trained in ILO guidelines, should examine referral cases from PHC.

Conclusion

In the discourse on Health and Development, Occupational Health is rarely discussed. Yet, as is evident from the case study of Rajasthan, when the bread earner is affected with occupational disease, there is no end to the suffering of the victims' family. Often the children drop out of school to support the family and repay the rising debts. The spouse works to meet both ends, neglecting her own health in the process. The mineworker and his family is worst affected given their low economic status, their unrecognized profession since there is no proof of employment, and the fact that they hail from the lowest social strata. Access to health care, government welfare measures reach them in spurts. Often the workers have to demand for it as part of their Human Rights, since Occupational Health Rights are seen as tenuous. Health issues push them further into poverty, forcing child labour and creating a second generation of illiterate workforce to suffer from the same ailments and meeting the same fate that their fathers and forefathers have met. Government also needs to ensure that businesses are responsible for their workers, since when neglected, the burden of looking after them falls on the government and the exchequer.

Hence, it is essential that Occupational Disease is introduced as a mandatory course in the study of medicine in India and every government hospital create a department of Occupational Disease. I have deliberately mentioned government hospital since it is accessible to a daily wage earner, cost effective, and besides a government hospital certificate is an acceptable evidence in the court of law.

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Health Care Access in a Developing Country: Significance of Medical Pluralism

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Abstract

Health services in a developing country like India are not accessible to a large number of people in the country. Allopathic medical system which constitutes the main state medicine is unable to provide health care services to all classes of people. The alternative medical systems such as ayurveda and unani have been coexisting in the country raising questions about the nature of medical pluralism. The present paper analyzes the significance of medical pluralism in the current context and examines the challenges faced by alternative medical systems in terms of scientificity and rationality in India.

Acronyms/Abbreviations

AYUSH: Department of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy, CCRUM: Central Council for Research in Unani Medicine, ISM: Indian System of Medicine, TKDL: Traditional Knowledge Digital Library, WHO: World Health Organization

Introduction

The concept of medical pluralism has been a debatable issue in sociology of health and public health for quite some time. In India there are diverse medical systems such as ayurveda, unani along with allopathy that offer cure to people. In a developing country like ours, different medical systems supplement the so called dominant allopathic medical system[*] in providing health care at both primary and secondary levels.

Medical Pluralism in India

The term medical pluralism was first introduced in the 1970s to characterize a situation in which people resorted to multiple health care systems and facilities other than biomedicine or western medicine or allopathy (Sujatha and Abraham 2009). Medical pluralism has become a "way of life" with varieties of options for healing and treatment. For a salient and a better public health care system parameters, of accessibility, safety and availability are essential to discharge health services to the most under-priviledged sections of the society. Since no knowledge is complete, a triangulation of different medical systems should be employed, thus giving rise to medical plurality in the public and private health domains (Priya 2012).

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[*] Alternative medical systems or alternative medicines are those systems of medicine used in place of the conventional allopathic medical treatment. The alternative medical systems include Ayurveda, Unani, Homeopathy.

However, the tradition of different medical systems existed even in the colonial period when allopathy was introduced by the British. According to Prasad (2007) the indigenous systems of medicine have been sidelined and hegemonized in more than one way by the western counterparts. Western medicine had been introduced by the British and hence became a part of the state imposed health care system in India in the colonial and post colonial period.

The Creation of Knowledge

In India, the British brought with them the concept of modernity and along with that came the trend of explaining everything in terms of scientific laws. This organized body of knowledge, which was mainly Eurocentric, got embedded through the process of colonialism and modern medical sciences is no exception to this. During the nineteenth century the administrative and institutional infrastructure necessary for the practice of western medicine was set up by the state. The hospital, and colleges established by the state formed the nucleus through which colonial medicine established its hegemony and marginalized the indigenous system. The state not only promoted the western medicine but also asserted and established its superiority over all other systems of medicine (Panikkar 1995).

A predominant character of modern civilization is that knowledge is ranked according to the elaborate criteria of scientificity. Modern medical thought led to the disqualification and subjugation of those forms of knowledge that are considered to be illegitimate in terms of the particular criteria of scientificity (Smart 2002). It is a fact that modern science is based on the laws of physical sciences and therefore, it can be directly perceived and measured. Science developed new instruments like electron microscope. Therefore, all those facts which can be demonstrated and which can be seen and measured through the physical instruments are treated as science and others which do not use these methods are treated as unscientific (Udupa 1978). In western thought what are considered to be principles of reason are those which have proven to suit the logic of natural sciences. For example, the protagonists of modern medicine argue that modern medicine which is scientific, stands superior to the non-scientific medicines as, for example, ayurveda and unani which do not use scientific equipments. In this context, Foucault (Farrell 2005) points out that science organized itself as a form of knowledge and was used as a mechanism to exclude particular people and experiences. Foucault points out that all forms of knowledge need not be scientific in order to be valid and the methods and procedures of science are not universally applicable. Scientific knowledge is not inherently superior or truer than other forms of knowledge. The belief in science exercises power in terms of excluding other forms of knowledge and creates social relations and hierarchies that lead to exclusion and inclusion. The order of knowledge and truth should not be reduced to the order of science. Young (Haralambos 1980), further points out that there is no objective way of evaluating knowledge, of assessing whether or not one form of knowledge is superior to another. If any knowledge is regarded as superior, it is because those with power have defined it as such and imposed their definitions on others and hence all knowledge is equally valid.

The idea of rationality is also important in determining the power relations within the medical sphere. The modern medicine while constructing the hierarchy on the basis of knowledge tends to eliminate or under estimate the traditional medical systems as irrational. What considers a rational justification will be specific to the standpoint of that particular tradition (MacIntyre 2006). According to MacIntyre when two traditions of thought are so different, what is considered self evident or obvious in one tradition, is considered dubious or incomprehensible in the other. The very principle of reason comes under question. There can be no rationality as such, but only rationality relative to the standards of some particular context.

The third world countries and their traditional medicines should in no way be seen as a reservoir of 'traditions'. India became heir to a wide variety of different oral and textual traditions, incorporating both exogenous and indigenous roots. Even within what is often thought of as the "Indian" tradition, there were several strands of scientific ideas and practices. Traditional histories of medicine have argued that the medical practices based on superstition, magic and ancient texts were replaced by an enlightened empirical science based on observation of the real world. This corresponds to what (Zysk 1991) says, that there was a transition in Indian medicine from magico-religious ideology to empirico-rational epistemology. Ayurvedic medicine, for example, presented a distinctive medical epistemology relying essentially on empiricism followed by explanations of observable phenomena. In medical field, Indian science was considered to have been remarkably well advanced before the dawn of the Christian era. The Indian medicines have been source of discoveries that were only taken up later and included into Western medicinal system (Arnold 2000). India is seen as characterized by complex processes of cultural hybridization encompassing both modernities and traditions. Within this cultural hybridization, differentiation between tradition and modern, rural and urban lose much of their sharpness and relevance. Rather than eliminated by modernity and development, many traditional cultures survive through their transformative engagement with modernity (Escobar 1995). The health care system has been working according to the dominant allopathic paradigm undermining the legitimacy of the "other" medical systems such as ayurveda or unani. Nonetheless these "other systems" have survived and regained legitimacy even in the official domains (Priya 2012) as is evident in the formation of AYUSH, a state initiative in the last one and half decades.

Modern Medicine and Non-Modern Medicine

The concept of "development" along with "modernity" has endorsed the claims to power over the human body as a domain of social knowledge. It has been argued that development is possible only when the entire society is within the ambit of modern medicine and is able to dominate folk wisdom, domestic remedies and non modern healers. Thus in the words of Visvanathan and Nandy, "language of modern medicine has contributed handsomely to the language of development" (1997:95). The body is taken away from the individual himself/herself and is handed over to the power structures of the society. The body in modern sciences is seen as either a carrier of hedonistic pleasures or a vehicle of disease and suffering (Visvanathan and Nandy

1997). Modern medicine is said to be the only source of development as it replaces the benefits of alternative medicines with itself and reflects itself as the only curer for diseases. (Madhulika Banerjee 2009) points out that modern medicine lays down what is or not legitimate in the realm of public health. "Developments in scientific research are continuously guided by this and are legitimate until they fulfill criteria set by yardsticks of 'scientificity' set by biomedicine and its allied disciplines" (2009:10). This implies hierarchisation of knowledge systems that leads to power dynamics..

One of the major contestations between ayurveda and unani and modern medicine has centered on the germ theory of disease. While modern western theory has looked at disease in terms of the diverse objective agents that invade our body, ayurveda and unani have looked at disease in terms of internal processes triggered by external factors (Visvanathan and Nandy 1997). Alternative medicine is based on a belief that health is a state of balance between several opposing aspects in the human body. Illness occurs when an individual falls out of balance, physically or mentally. The "causes"of imbalance could be change of weather, intake of certain food; external factors, such as magical or supernatural powers; mental stimulation and societal reasons. Alternative medicine tries to restore the balance using different therapies (WHO 2000).

Ayurveda and Unani in Colonial Period

The apparent inability of the western medical practitioners to deal with the local diseases encouraged ayurvedic and unani remedies. However, with the passing of the Bombay Medical Registration Act of 1912 which gave recognition to practitioners of Western medicine but excluded all others, it became a rather contentious issue. The fear that all indigenous practitioners would be treated as 'quacks' was reinforced in 1915-16 when an Indian allopathic doctor in Madras was removed from the medical register for assisting in ayurvedic dispensary (Arnold 2000). The practitioners of alternative medicine were relegated to an inferior status as they were not recognized by the state and therefore, deemed unqualified. The Act did not debar the practice of alternative medicine, but it did not have the approval of the state (Panikkar 1995). The attitude of the state and its senior medical officers towards alternative medicine remained largely one of hostility (Arnold 2000). However, there are exceptions and one apparent exception in this case was Sir Pardy Lukis, Director General of IMS in 1916. He recognized that since 90% of the population lived in the countryside and had little access to Western medicine; it made sense to support alternative medicine as far as possible so that the basic health needs could be met. In 1918 and 1920, the Indian National Congress passed resolution stating the 'undeniable claims to usefulness' of the ayurvedic systems and established colleges and hospitals for instruction and treatment in accordance with the indigenous system (Arnold 2000).

Shifts in Ayurveda and Unani in Independent India

The leaders of the ayurvedic and unani movement viewed the achievement of independence as the dawn of their own emancipation and began to make demands for full-fledged support to alternative medicines from both the central and state

governments. There were committees formed for the formulation of plans for health services development. The Health Survey and Development Committee of 1946 chaired by Sir J. C. Bhore in its report touched only briefly on the indigenous systems of medicine and recommended the rapid extension of modern scientific medicine (implying allopathic medicine) throughout the country (Priya 2012, Brass 1972). Pandit Jawahar Lal Nehru was quite influenced by the western thought and values and argued that allopathic medicine would be the best medical option for the Indians to catch up with the modernization process. The National Planning Committee's (NPC) report in the same year gave priority to the alternative practitioners. The NPC report expressed willingness to include alternative practitioners in the health service reforms whereas the Bhore Committee excluded this dimension to a large extent. However, the NPC had no real political powerbase within the Congress party, and its Public Health Report did not make any impact later. Alternative medical practitioners did lobby to keep NPC recommendations alive on including alternative medicines as a part of the reformed health services, but in vain (Jeffery 1998).

In fact, the Chopra Committee on Indigenous Systems of Medicine was set up which submitted its report in 1948. The report said that there should not be any separate systems of western or Indian medicine. The aim of all systems of medicine is the maintenance of health, prevention and cure of diseases. The Committee suggested the integration of the teaching of ayurveda, unani and other alternative systems with that of modern medicine. The assumption was that as there can be no cultural specificity of science, different systems of knowledge can be taught together (Banerjee 2002). The committee felt that Indian medicine can take much of the practical experiences from western medicine and western medicine can also learn from the comprehensive philosophical background of Indian medicine (Udupa 1978).

The Sokhey Committee of 1948, the Sub-Committee on Health set up by the National Planning Committee of the Indian National Congress, differed from the top-down approach. It recommended that man-power and services be developed from below to upwards. Youth in every village would be trained in primary health tasks and later be promoted to doctor training on performance (Priya 2012).

In brief, three models of development can be summarized as below:

1. The 'international standard' development model represented by Bhore Committee, was endorsed by the Nehruvian perspective. Here the focus was on the need for scientificity as defined by the modern allopathic medicine.
2. The 'revival of ancient canonical traditions' model reflecting on the rise of cultural identity and espousing the revival of traditional systems. This reflected the validity of the alternative medicines that benefitted many focusing on the indigenous perspective.
3. The 'people-centered and pluralistic' development model represented by the Sokhey Committee. This focused on the need to start from the below or subaltern perspective (Priya 2012). In the post-Independence period, Nehruvian perspective prevailed over indigenous and subaltern perspective that concretely shaped the health policy of the country.

In 1978, the WHO and the United Nations Children Fund (UNICEF) came out with the Alma Ata Declaration with the goal of providing health care for everyone by the year 2000. In support of that goal, WHO, UNICEF and the World Communities endorsed alternative medicines program worldwide and also underlined the significance of including alternative medical systems in providing primary health care to 80% of the world's population (Banerjee 2002). Their low cost, accessibility and people's faith made them ideal for the public health care delivery program. With the Alma Ata Declaration followed the Chiang Mai Declaration in 1988 entitled 'Saving Lives by Sharing Plants'. It recognized that medicinal plants used in ayurveda and unani are essential in primary health care both in self medication and in national health services (Banerjee 2002). While Alma Ata declaration and Chiang Mai declaration talked about comprehensive health care, Rockfeller and Ford Foundation supported selective primary health care. Indian state committing itself to Health for all by 2000 in Alma Ata took a u-turn to endorse selective primary health care with exclusive emphasis on allopathic medicine.

Shifts in Ayurveda and Unani during Globalization

The most obvious development noticed during the period of globalization is an increase in the role of the state along with the rapid expansion in the market for the ayurvedic and unani industry. The efficacy of ayurveda and unani drew attention towards the scheming pharmaceutical companies (Priya 2012). By now, the limitations of allopathic medicines and its iatrogenic outcomes were known. Ayurvedic industries like Himalaya, Dabur etc. and unani companies like Hamdard had found an important space in the global market. Indian Systems of Medicine (ISM) policy document was initiated in the 1990s. The Department of AYUSH i.e. Ayurveda, Yoga, Unani, Siddha and Homeopathy under the Ministry of Health and Family Welfare, Government of India was initiated during this period. In March 2001, a conference was organized jointly by the Confederation of Indian Industry (CII) and the Department of ISM (Indian Systems of Medicine) called 'Good Health in the New Millennium'. This was a milestone event as it was for the first time that a conference was held to discuss the progress of the partnership between different actors that have played important role in the development of ayurveda. The CII president discussed the importance of ayurvedic industry and those of its raw materials in the global market (Banerjee 2002).

In the era of globalization, where scientific validation and standardization of unani medicines were focused, Ministry of Health and Family Welfare, Department of AYUSH, highlighted the importance of the government's project of Traditional Knowledge Digital Library (TKDL) on unani medicine, which started in 2004 to record detailed knowledge on therapeutic efficacy of different medicinal plants used in unani. TKDL was an effective tool for preventing misappropriation of the traditional medical knowledge. The TKDL team also transcribed unani formulations existing in 14 classical texts consisting 42 volumes in Urdu, Arabic and Persian languages into five international languages-English, French, German and Japanese, giving it a global touch. The pace of research and development in Indian Systems of Medicine has accelerated with the establishment of separate departments for each of the medical systems, CCRUM being exclusively for unani medical system (Newsletter 2006).

In a developing country like India with its vast population, modern medicine had its own limitations in providing health care access to all classes and caste groups. Also, given the growing cost of allopathic health care, pharmaceuticals and institutionalized services, the commercial interests and corporate hospitals have further excluded a large majority of the sick-poor. The fact that more and more health problems are today created and sustained by the urban industrial lifestyle, one needs to understand the significance of diverse medical knowledge systems. Also, modern medicine with its curative approach finds it difficult to deal with range of health issues. The relationship between the modern doctor and the patient is furthermore increasingly dominated by attempts made by the modern techniques to reduce the patient from a person to that of a case, thus objectifying the body. Modern medicine tries to change the patient from an experiential reality to experimental one. According to Ivan Illich (1976), "iatrogenic medicine reinforces a morbid society in which social control of the population by the medical system turns into a principal economic activity".

It is interesting to note that Indian state initiated AYUSH to promote commercial interests in the era of globalization rather than provide further accessibility to the poor. However, people do recognize the strengths of AYUSH as it has potential to include other systems of knowledge. A few studies noted that AYUSH medicines are safe and has treatments for lifestyle diseases for which allopathy does not have an effective cure (Priya 2012). In a conference held by WHO, there were scholars who opined that traditional medicine is a holistic approach to medical care as it suits the environment and lifestyle of the community. It considers a person in his or her totality within an ecological context and usually will not look after only the sick part of the body in isolation. Besides giving treatment, alternative medical practitioners usually provide advice on lifestyles and healthy behavior (WHO 2000). They try to show that their medicines are suited to the physical adaptability of the people. Alternative medicine is based on the needs of individuals. Different people may receive different treatments even if they suffer from the same disease. It is based on a belief that each individual has his or her own constitution and social circumstances which result in different reactions to "causes of disease" and treatment (WHO 2000). It is patient specific and not disease specific.

Conclusion

In developing countries, the high demand of health services and the shortage of health personnel, resources and facilities result in high rate of morbidity. Thus, there is a need to explain these challenges in the developing countries. The state and its policies also play an important role in formulating the health care services. In the 1950s there was a bend towards Nehruvian perspective of scientificity thus promoting allopathic medicine while other medical systems remained in the periphery. This was a failure as health care services remained inaccessible to most of the population. In 1980s and 1990s, there was further exclusion of diseases and treatment processes for the sick-poor. In the last one and half decade, the state seems to have brought back the emphasis on alternative medicines through AYUSH, but more for promoting commercial interests rather than extending health services to the vulnerable groups at an affordable cost.

Health care services need to be accessible to all sections of the society. The current crisis in the era of globalization demands that diverse medical knowledge systems be optimally utilized in providing better health care. These alternative medicines now need to be harnessed within the public health care domain along with the allopathic medicine. The public health care sphere along with the primary health care in a developing country thus is required to be designed in an effective manner giving equal chances to ayurveda and unani, as allopathy. Thus, medical plurality opens up the space where various medical practices can contest on an equal ground to offer an improved health care system for all.

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Mobile Health Services through CSR Initiatives

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Abstract

Health forms a crucial component in the developmental efforts of a country. However, the approach of the government and other stakeholders towards this issue is an area of concern in India. The present article focuses on the mobile health services provided under the corporate social responsibility (CSR) activities of the corporate houses and their viability and sustainability in the long run, especially in the context of development of human resources. Accountability of the health services that are provided through these mobile health units and their continuity are some other concerns. The article aims to highlight that rural mobile health initiatives under CSR tend to be horizontal in nature. Until and unless integrated with the larger health initiatives of the government, running of any piecemeal initiative cannot complement or strengthen the larger health picture of the country.

Acronyms/Abbreviations

ANM: Auxiliary Nurse Midwives, ASHA: Accredited Social Health Activist, CSR: Corporate Social Responsibility, MHU: Medical Health Unit, NRHM: National Rural Health Mission, PTB: Pulmonary Tuberculosis, UTI: Urinary Track Infection

Introduction

Availability and accessibility of health services is a major area of concern, especially in rural India. High infant and maternal mortality rates, malnutrition, anaemia amongst women, water borne and deficiency diseases continue to be rampant in spite of various initiatives. Lack or poor quality of curative and preventive health services has a direct impact on public health which directly impacts the human resource development of the country. Dismal condition of healthcare services in rural India has been documented by many authors. The plight of primary health centres, absence of qualified doctors and medicines, presence of quacks and local healers whom people consult during medical emergencies and inaccessible district hospitals are some of the concerns raised all over the literature available on health services in India. The situation has not changed much in rural parts of India in spite of initiatives such as National Rural Health Mission. Even a brief visit to tribal belts of Madhya Pradesh and rural areas of Uttar Pradesh would show the dismal plight of health services in rural India. This state of affairs, to some extent explains the dependence of the rural population on

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quacks, local healers and mostly irrational health practices which give psychological confidence to people in the absence of other alternatives. In this light, the intervention of corporate houses in the area of health is seen as a positive development. Mobile health units are much needed initiatives in the present scenario where rural urban divide in resource allocation is huge, with resource allocations generally being skewed in favour of urban centres (Lipton 1977) at the cost of rural areas. It is therefore necessary to evaluate the mobile health initiatives under CSR in rural India through the frame of equity and redistribution of resources and within the framework of national rural health policies. The discussion in this paper is based on the observations and information collected from fifteen villages in the tribal belt of Madhya Pradesh.

Health Mission in Rural India: The Ground Reality

The National Rural Health Mission was launched in the year 2005 with an aim to provide accessible and affordable quality health services to rural population. The mission is aimed at making public health system functional and accountable to the community, decentralise and evaluate these services against established benchmarks. The mission focuses at village level health interventions for a population of 1000 followed by sub health centre at Gram Panchayat level with 5-6 villages; at Primary Health Centre level with cluster of 50-60 villages and a block level hospital for 100 villages. There is a provision for ASHA worker and Anaganwadi worker in every village. However, the topography of Indian villages is such that what looks so appealing and achievable on the paper becomes a nightmare in reality. For example, the villages coming under one gram panchayat or a block may be geographically so scattered or so cut off from the rest of the area on account of absence of good roads that reaching the designated health facility may be an issue. The nearest hospital may be 25-60 kms away with no available bus service to take people to the hospital. If one does not own or does not have capacity to hire a vehicle to reach the hospital, he/she may get into serious medical condition. People in some of the villages visited recounted painful stories of loss of lives on account of lack of medical services at hand. Women have had to walk for kilometres in their advanced stages of pregnancy to reach hospital and a few lost lives during complicated deliveries. In this situation, these MHUs with whatever little service they are offering to the rural population are seen as a blessing to the rural India.

The Mobile Health Services as CSR Initiatives

The mobile health units (MHU) are known as mobile health vans that visit the village on specified days at specified times for a fixed duration. Mobile health vans are being run by GAIL, Cairn India, DLF, Ranbaxy, Indian Oil, Wockhardt, Ford India and many other corporate houses. These mobile vans are equipped with stethoscope, thermometer, blood pressure machine, torch, weighing machine, nebulizer and oxygen cylinder. In addition, they may have refrigerator for keeping medicines, television and a DVD player for information dissemination. These vans are, at times also fitted with GPS to regulate and monitor their movement. A qualified doctor and an assistant accompany the vans. The services of these vans include check-ups, prescribing and

distributing medicines, referrals and organising health camps. The mobile health vans operating under CSR generally carry out their interventions within a prescribed radius of the factory of the business house engaged in CSR. The identification of villages for health services which should normally be done through base line studies and need assessment is many a time done on the convenience of the route map of the van and availability of the patients in the village under consideration. These vans make weekly visit to each village. They station themselves at a prescribed location in the identified village for an hour to hour and half and treat 100-120 patients on an average per day. The doctor, after diagnosis of the ailment, prescribes medicines, which are dispensed by the assistant free of cost. Most of the medicines which are dispensed are generic in nature. Many tribal and other remote villages do not have access to health services and these underserved areas have now started to come under the mobile health services of the corporate houses.

Common diseases prevalent in the area for which patients approach medical van are parasitic infestations, lice, worms in stomach, malnutrition and body aches, muscular disorders, arthritis, bronchitis, asthma, UTI (Urinary Tract Infection), fever, leucorrhoea (in females), anaemia, malnutrition, vitamin deficiency, amoebiasis, diarrohea, dysentery, PTB (Pulmonary Tuberculosis), stomatitis and skin infections such as Tinea Versicolor, eye and ear infections. In addition, there are seasonal illnesses such as cough, cold, fever and dysentery during summers and malaria during monsoon season. The MHU provides curative treatment for these ailments. Since the mobile health facility is available only once a week, hence, most of the beneficiaries continue with the traditional health practices, approach unregistered private doctor or visit the PHC during medical emergency on the day or time when van is not available.

Beneficiaries of the MHU Services

Most of the people who use the services of the mobile health vans are below the poverty line; labourers who work in the village or in the nearby towns and also agricultural labour. The rich people in the area generally have vehicles and they prefer treatment from private hospitals in nearby towns or district hospitals. The services of the van are availed of by men, women, children and elderly of the village. Adolescent girls are at times hesitant to avail of the services on account of the absence of a lady nurse accompanying the MHU. The beneficiaries are by and large happy with the services of the mobile van and with the quality of medicines.

Interface with Existing Health Services

The representatives of government are often ignorant of the services provided by the mobile health units run by the corporate houses. Block medical officers, CEO Gram Panchayat and other health officials are not informed of these services being provided through corporate CSR initiatives though the state authorities are keen to collaborate with such services to enhance their vaccination program and other vertical health services. Coordination between mobile health van and ASHA workers who are appointed under NRHM is largely dependent on the initiative of the doctor rather than on the design of the mobile health programme. Also, the doctors associated with the

mobile health vans many a time do not have enough knowledge about nearby health services run by the government where they can further refer patients.

Horizontal or Vertical Modes of Delivery?

The curative and preventive health services can be provided either through horizontal or vertical modes of delivery. In the horizontal delivery system, the services are provided to the communities through public financed health systems. The primary health care provided under NRHM falls under the horizontal health delivery services. Specific targeted interventions which are not completely integrated into the health system come under the vertical delivery of the health services (Banerji, 1984). Typically, mobile health units have been meant to provide occasional health services. The range of services that is expected to be aimed at through these ambulatory health services includes preventive measures such as immunisation, promotion of health services or screening of diseases. Whenever curative measures are undertaken they are expected to focus on aspects such as eye and dental care. This implies that mobile vans can be effective in delivery of preventive or curative programmes which may require just one or occasional visit.

In rural areas, the long queues of patients waiting to get medicines from the mobile health units speak volumes about the benefits of the programme. Sound and accessible health facilities are still a dream for rural population in spite of the National Rural Health Mission unveiled by the Government of India in 2005. These mobile health units provide much needed health support to the rural population even though they are available once a week for a few hours. However, there are a number of issues connected with the mobile health services. The experience across the world and the literature points to the fact that the mobile health units are effective and popular in conflict zones and are operational in those areas which do not have medical facilities. However, these facilities are and should be considered as exception and the state must find ways to provide health services to the inaccessible areas. These services must be treated as stop gap arrangements (Mortier and Coninx 2007).

Thus, mobile health services are more suitable for vertical health service delivery and therefore, are not expected to replace the health services to be provided by the state. These services may also be used effectively to provide a package of selective primary health services. But it is necessary to have a fixed health facility to which the doctor from these units can refer patients to (Mortier and Coninx 2007). This implies that accessible and quality primary health centres and hospitals are essential even when such services are available.

Secondly, a glance at the nature of illnesses attended to by the mobile vans shows that barring a few, most of these ailments are of regular nature which may occur anytime during the year and hence require a regular medical intervention. According to (Mortier and Coninx 2007), the probability of a consultation in a village is equal to the number of days that the mobile health unit is in the village/number of days in the year. Therefore, according to them, the probability of seeing a patient in acute phase of his illness if there is a daily health service available is 100%. This reduces drastically to

14.24% if the services are once a week. The major concern with the mobile health units through CSR is that they intend maximum coverage in terms of area and population and therefore, cannot be present for longer hours in a day or provide these services on all days to a village. Their coverage is mostly restricted to once a week for one to one and half hours in a village. But, interestingly, instead of providing vertical services they focus on horizontal services. In such situations, a patient with acute illness and with only 14.24% possibility of getting attended to through these mobile health units can find himself in a real discomfort since the health centres are either not functioning properly or are not accessible.

Another area of concern with the mobile health units operating under CSR is their lack of coordination with the government health services of the area. While a number of programmes initiated by the government can be facilitated through these mobile health units, however, these services often do not network with government services and hence, there is at times a complete absence of knowledge amongst health authorities about presence of such services. The mobile health units many a time do not synergise their health services with services under NRHM. Their inability to coordinate with local ASHA worker, Auxiliary Nurse and Midwives (ANM) and gram panchayats is an area of concern. There is a need for these services to become part of the structural pyramid of NRHM. This would also ensure that these service providers are knowledgeable about the referral services that they can provide to patients and can guide them on appropriate treatment at higher level.

The state also needs to take a serious note of the mobile health services provided under CSR. The state must prepare guidelines on operationalizing these services and the nature of the health services that they may provide. These mobile health services are not expected to provide an alternative to the established health system. It may therefore, be beneficial to push these services to mandatorily network with government health services.

The last area of concern is the urban- rural divide in health services. The urban bias in resource allocation and provision of health service is rather striking in India. While urban areas demand, command and get budgetary allocations for health services, the rural population is often left to these initiatives of the corporate with no right based approach embedded in them. Withdrawal of these mobile health services from an area can lead to crises for the population dependent on them especially when it does not have a right to seek continuation of these services.

Substitution of regular health services in rural areas with mobile heath units is neither workable in the long run nor desirable from the point of human resource development. A sound infrastructure and functional health system is necessary to run horizontal health programmes (see Msuya, 2005). Thus there is a need to identify and create a balance wherein the mobile health units can function as short term goal. In the long run, it is essential to identify the areas where such CSR contributions can strengthen the horizontal health services by complementing the efforts of the government and also moving gradually into the domain of the vertical services with

special focus and attention being given to a health area. The long queues of patients may provide justification for running these units but the same queues and the nature of ailments that are treated also demand that for social development, these services can only be stop-gap arrangements. In the long run, sustained and accessible horizontal medical services will have to be provided to the rural population.

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Nutritional Status of Preschool Children in Selected Indian Cities: A Study of Slum and Non-Slum Differentials

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Abstract

This study examines the differentials in childhood undernutrition between slum and non-slum children aged 0-59 months in selected cities of India. The third round of the National Family Health Survey data conducted during 2005-06 is used in the analysis. Three anthropometric indicators have been used to measure the childhood undernutrition–underweight, stunting, and wasting. Descriptive statistics and binary logistic regression are used for the analysis of data. The results show that the level of child undernutrition as measured by all three selected indicators is higher in slums as compared to non-slum areas of the cities. However, the slum/non-slum gap is more profound for underweight than other indicators. Multivariate analysis shows that after adjusting the socio-economic characteristics, the probability of being undernourished is significantly higher among slum children in comparison to non-slum children. An integrated approach is needed to improve nutritional status of children with a special focus on slum and poor sections of population of the cities. The idea of National Urban Health Mission as envisaged by the Government of India would certainly help in improving the health status of children living in the slums in Indian cities.

Acronym/Abbreviations

BMI: Body Mass Index, DHS: Demographic and Health Survey, ICDS: Integrated Child Development Services, IIPS: International Institute for Population Sciences, MDG: Millennium Development Goal, NFHS: National Family Health Survey, UNICEF: United Nations International Children's Emergency Fund, WHO: World Health Organisation

Introduction

Child malnutrition is one of the major developmental problems in the developing regions of the world. It is also one of the significant factors contributing to infant and child mortality in developing countries (Black et al. 2008; Victora et al. 2008). Nutrition during the preschool years (first five years) of childhood has an impact not only on growth and morbidity, but also acts as a determinant of nutritional status in later stages of life. Undernutrition retards the future productivity of a nation and increases the economic burden because it leads to increased risk of severe infections and even deaths from infectious diseases (Chen et al 1980), (Bardosono 2007) creating an additional psycho-social burden. The sixth report on global nutrition shows that the extent of undernutrition is still incongruously high and the rate of reduction in most regions of

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the world is slow (United Nations, 2010). According to the World Health Organisation (WHO), around 19.3 and 31.6 percent of children in the developing countries were underweight and stunted respectively in 2007, while the corresponding figures for the developed world are 1.5 and 6.0 percent respectively (United Nations, 2010). Given this vast gap in the prevalence, undernutrition is considered as a major public health problem in the developing countries.

The proportion of underweight children in India is amongst the highest in the world and nearly doubles that of Sub-Saharan Africa with dire consequences of morbidity, mortality, productivity and economic growth (Gragnolati et al., 2005). As per the third round of the National Family Health Survey (NFHS-3), 2005-06, almost half of the preschool children below the age of five years are stunted, two-fifth of them are underweight and one-fifth of them are wasted. Nearly 60 million children are underweight in India (IIPS and Macro International 2007). India is committed towards halving the prevalence of underweight children by 2015- a key indicator for achieving the MDG 1 of eradicating extreme poverty and hunger and MDG 4 of reducing child mortality. However, despite the efforts by the Government of India and national as well as international donors to enhance child nutritional status through various programmes including the famous Integrated Child Development Services (ICDS) schemes, the undernutrition level among children remains staggering. More importantly, disparities in nutritional achievement by place of residence and socioeconomic backgrounds persist in India (Das, 2008; Das and Sahoo, 2011; Das, 2013).

Studies continue to show that the conditions that affect health and nutrition are more favourable in urban places as compared to rural areas. One of the reasons put forth to explain the urban health advantage has been the availability of better and modern health care system in the cities. It is believed that better and modern health care system in cities and towns facilitates public health interventions, such as campaigns to control epidemic diseases, vaccination and maternal-and-child health programs in contrast to rural areas where health care system is in poor shape (IIPS and Macro International 2007). However, the urban advantage, particularly in child health (Fotso 2006), has supposedly faded in recent decades, since the urban population explosion in most developing countries has not been matched by an adequate expansion of sanitation, health services and livelihood opportunities (Brockerhoff and Brennan 1998; Lalou and Legrand 1997). The recent urbanization has proportionately brought about considerable health inequalities between different socioeconomic groups within regions and between regions (Arokiasamy et al. 2013). In spite of persistence of significant health disparities within cities, systematic attempts to quantify them have been limited. The growing trend of migration from rural to urban centers is fueling undernutrition, especially among lower income groups. Many migrant families end up living in overcrowded and unsanitary slums where conditions are more hazardous for children than life in a poor rural village.

According to the 2011 provisional Census report, nearly one-third of India's population lives in the urban areas and is growing at a faster rate. As per the United

Nations projections, if urbanization continues at this present rate, 55 percent of the total population of the country will be in urban areas by 2050. But this growth rate is a matter of apprehension than affirmative. While urban average annual growth rate stabilized at less than 3 percent over the past decade (2001–2011), the slum growth rate nearly doubled at 5–6 percent during the same time period. Within urban India, there was a 45 percent increase in the number of people living in the urban slums during 1981-2001 (Chandrasekhar, 2005). This growth has been heavily contributed by migration from rural areas to megacities in search of livelihood. Most of the unskilled migrants, due to low income and poverty, live in dilapidated conditions of slums. Urban slums lack basic amenities such as safe and adequate water supply, sewerage and sanitation (Marina, 1999). This paper focuses on assessing the levels of child undernutrition among children below the age of five years in selected Indian cities.

Methods and Materials

The study utilized the third round of the National Family Health Survey (NFHS, 2005-06) data, which is the Indian version of Demographic and Health Survey (DHS). The DHS is the standardized survey conducted in over 80 countries worldwide. The sampling procedures and questions in these surveys are in a standardised format across all countries. NFHS-3 is co-ordinated by the International Institute for Population Sciences (IIPS), Mumbai and Macro International with the support of the Ministry of Health and Family Welfare, Government of India. It provides information on important indicators of maternal and child health, fertility and mortality. NFHS-3 provides information on stunting, underweight and wasting among children below 5 years. This paper uses nutrition data by background characteristics for analysing the levels and factors of undernutrition among children under the age of five years in selected Indian cities.

Eight Indian cities namely Delhi, Mumbai, Kolkata, Chennai, Meerut, Indore, Hyderabad, and Nagpur representing different parts of India have been specially focused in the NFHS-3. The survey collected information on 6693 children below five years from the above cities. Among the children, 53 percent are male and 47 percent are female.

Outcome Variables

The three most popular standard indices of physical growth identified by the World Health Organization (WHO) namely stunting, underweight and wasting are used as outcome variables to describe nutritional status of children. Weight for age (underweight) is an indicator of either current or past nutrition, whereas height for age (stunting) is an indicator of past nutrition. Weight for height (wasting) is a sensitive indicator of current nutrition status. These three indices were made dichotomous with Z-score below minus two standard deviation as stunted, wasted and underweight while the rest as not stunted, wasted and underweight.

Independent Variable

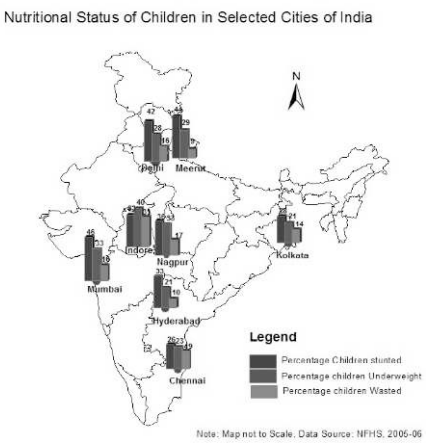
Various socioeconomic, demographic, child and maternal factors were taken into account as independent variables to find out the correlates of nutritional status of urban

preschool children. Religion, caste, living condition and standard of living were used as household socio-economic indicators having evident effect on nutritional status among children. Maternal factors include age, education, mass media exposure, Body Mass Index (BMI) and work status of the mother. Child related factors such as age, sex, birth interval, birth order, size at birth, number of living children in the family and recent diarrhoea episode if experienced by the child are included in the analysis.

Results

Prevalence of stunting, wasting and underweight among urban preschool children

The proportion of stunted, underweight and wasted urban pre-school (0-5 years) children in the eight Indian cities is shown on map-1. Result shows that 39, 28 and 16 percent of children are stunted, underweight and wasted respectively in the eight Indian cities pooled together. Disaggregated figures by cities show that more than 40 percent of the children are stunted in Mumbai, Delhi and Meerut whereas the figures for Chennai and Kolkata are less than 30 percent. Around one-third of pre-school children are stunted and wasted in Indore. Among the cities taken into account for the analysis, the prevalence rate of underweight (20 percent) and wasting (9 percent) among the pre-school children is the lowest in Hyderabad. Indore tops the list of underweight preschool children followed by Mumbai and Nagpur (each with 33 percent), Meerut (29 percent) and Delhi (28 percent). The levels of underweight among pre-school children are relatively low in Hyderabad (21 percent), Kolkata (21 percent), and Chennai (23 percent). The above description indicates that Indore is the city which suffers the most in terms of child malnutrition measured by wasting and underweight. The nutritional status of children in two south Indian cities (Hyderabad and Chennai) along with Kolkata is better as compared to the rest of the cities included in the analysis. Delhi and Mumbai are the two major metropolitan cities having higher proportion of stunting in India.



Map 1: Nutritional Status of Children in the selected cities of India

Slum/Non-slum Differential in Nutritional Status among Preschool children

The slum and non-slum differential in the prevalence of stunting, underweight and wasting in the selected cities is presented in Table 1. The levels of stunting, underweight and wasting among children are higher in slum areas than the non-slum areas. The gap is six, seven and two percentage points for stunting, underweight and wasting respectively. Though this pattern is observed across most of the selected cities of India, the degree of gap varies. Substantially high proportion of slum children is stunted and underweight in Nagpur, Indore and Kolkata. It is to be noted that overall level of undernutrition is also high in Indore and Nagpur.

Table 1: Slum/non-slum differentials in prevalence of malnutrition among children aged 0-59 months in selected cities of India, 2005-06

Selected Cities	Stunting			Under weight			Wasting			Sample size
	Slum	Non-slum	Difference	Slum	Non-slum	Difference	Slum	Non-slum	Difference	Number
Delhi City	45.3	40.6	4.7	33.6	26.0	7.6	16.8	15.9	0.9	1151
Meerut	45.3	43.5	2.0	27.3	30.4	-3.1	9.1	8.7	0.4	1193
Kolkata	34.4	22.5	11.9	28.1	15.0	13.1	16.1	12.5	3.6	600
Indore	50.0	32.0	18.0	50.0	40.0	10.0	50.0	30.0	20.0	785
Mumbai	48.2	41.1	7.1	34.8	28.9	5.9	18.3	12.2	6.1	623
Nagpur	50.0	26.5	23.5	43.5	26.5	17.0	20.8	14.7	6.1	776
Hyderabad	33.3	32.1	1.2	22.5	19.3	3.2	10.3	8.9	1.4	979
Chennai	28.6	23.7	4.9	30.6	16.9	13.7	22.4	16.7	5.7	586
City Total*	43.0	37.0	6.0	32.8	25.7	7.1	17.5	15.5	2.0	6693

* eight cities pooled together

Socio-economic differentials in Nutritional Status in the cities

It is evident from the Table 2 that higher percentage of children from slum areas suffer from undernutrition regardless of their religion, caste and standard of living. Even at similar socioeconomic condition, the levels of stunting, underweight and wasting are higher for slum children as compared to the children from non-slum areas. This pattern is observed in cities across India. Birth order and prevalence of stunting and underweight among children is positively related. However, it has a negative association with the wasting among children. Slum children across their birth order are more stunted, underweight and wasted than the children from non-slum areas. Prevalence of stunting, underweight and wasting rate increases with age of mother. Nevertheless, young mothers from slum areas also have higher proportion of stunted, underweight and wasted children than their counterparts from non-slum areas. Media exposure and proportion of stunting and underweight are inversely associated in the selected cities of India. This pattern is not observed in the case of wasting among children. The level of stunting and underweight children is higher among children of mothers having exposure to media in slums than their counterpart in non-slum areas. The prevalence rate of stunting, underweight and wasting decreases with mother's education, higher the level of education lower the level of undernutrition. Education and prevalence of stunting, underweight and wasting is negatively associated across the cities in the study. However, women from slum areas with no education have more stunted, underweight and wasted children than the illiterate women from non-slum areas.

Table 2: Percentage of stunted, wasted and underweight by different socio-economic, maternal and child related background characteristics In Slums and Non-slums in Indian Cities, 2005-06.

Background	Stunting				Under weight				Wasted			
	Mega Cities*		Other Cities**		Mega Cities		Other Cities		Mega Cities		Other Cities	
	Slum	Non- slum	Slum	Non- slum	Slum	Non- slum	Slum	Non- slum	Slum	Non- slum	Slum	Non- slum
Religion												
Hindu	47.2	36.9	45.0	28.6	34.8	24.9	39.4	30.9	15.4	15.8	20.4	21.0
Others	41.9	33.2	47.3	38.1	32.7	19.2	37.1	37.6	17.0	15.6	15.5	18.1

Caste												
SC & ST	54.4	44.5	48.1	36.2	38.0	27.4	42.1	42.9	14.7	15.3	16.6	22.8
OBC	44.0	28.9	48.3	34.5	35.2	25.4	39.0	32.8	19.6	15.7	18.0	17.9
Others	42.6	36.7	39.6	26.7	32.0	22.5	35.3	28.8	14.8	16.0	22.4	21.2
SLI												
LOW	51.0	65.3	64.5	60.5	48.7	50.5	59.2	55.3	30.4	20.9	21.7	8.2
Medium	51.2	49.0	50.5	44.2	42.4	34.5	39.8	47.4	17.8	14.1	18.6	20.2
High	40.3	32.9	42.5	27.3	26.4	20.8	37.2	29.0	12.2	15.6	18.6	20.8
Birth order												
1	39.6	28.6	43.0	27.0	33.5	20.1	37.7	29.0	17.0	16.7	19.5	19.9
2	48.1	37.7	45.9	29.7	32.9	24.7	41.9	28.9	12.5	16.1	22.5	21.4
3	49.5	46.7	45.3	32.4	33.2	29.6	36.5	41.0	19.5	16.7	17.6	17.8
4+	49.9	47.4	51.6	50.5	38.8	27.4	37.1	47.6	15.8	9.7	11.9	19.9
Age of Mother												
15-24	47.8	41.7	48.3	34.2	36.8	25.2	42.0	37.2	16.6	17.1	21.8	20.7
25-34	45.9	33.3	42.6	30.0	33.7	23.6	36.8	31.0	16.3	15.5	17.6	19.7
35+	34.1	39.0	58.6	38.5	26.3	20.3	36.2	36.4	9.8	13.0	12.9	23.0
Work Status												
Not working	45.5	35.8	44.0	31.0	33.1	24.4	37.8	33.6	15.3	16.6	19.3	19.8
Working	46.3	37.9	52.7	34.0	39.9	20.8	43.3	29.4	19.0	12.2	17.2	21.7
Media Exposure												
No	63.5	54.4	55.9	45.3	44.2	24.4	39.0	50.9	10.9	11.1	14.0	25.2
Yes	44.1	35.1	44.6	30.9	33.3	23.7	38.7	32.1	16.3	16.1	19.4	19.9
Education												
No	55.8	49.9	56.7	51.7	43.1	29.7	42.6	52.4	18.9	12.7	15.9	23.1
Secondary	43.5	37.6	45.7	32.3	30.7	26.4	40.8	34.7	14.2	16.1	20.8	19.6
Higher	11.4	23.7	21.3.	17.7	19.1	13.8	18.2	17.9	16.2	17.2	14.5	19.2
Sex												
Male	45.6	38.3	48.3	30.5	33.0	25.4	39.1	34.1	15.9	17.6	18.9	22.8
Female	45.8	33.9	42.7	32.7	35.6	22.0	38.3	31.5	15.9	13.8	18.9	16.9
Age												
0-11	23.9	15.0	20.9	16.5	25.0	17.8	25.2	24.9	30.4	25.4	27.1	24.2
12-23	53.4	47.9	51.6	33.8	33.5	20.8	37.9	29.5	11.8	12.0	18.5	14.9
24-35	54.9	42.8	59.9	42.7	39.7	24.6	46.8	41.9	13.0	14.0	16.5	19.9
36-47	49.8	43.1	51.3	32.0	35.0	31.0	43.0	30.5	14.8	17.1	13.3	20.6
48-59	40.8	29.1	41.7	28.7	35.2	22.6	39.0	34.9	13.3	11.2	20.0	21.3
Total	45.7	36.2	45.7	31.5	34.2	23.8	38.7	32.9	15.9	15.8	18.9	20.1

*Megacities include Delhi, Kolkata, Mumbai, Hyderabad and Chennai
** Other cities incudes Indore, Meerut and Nagpur

Multivariate analysis

In order to assess the net effect of slum/non-slum residence on the child's nutritional status, binary logistic regression analysis is employed. In the regression models, the effects of other pertinent socio-economic and demographic factors were adjusted to find out the net differentials in child undernutrition by slum and non-slum areas. The result obtained from the logistic regression analysis is presented in terms of

Table 3: Predicted probability (95% confidence intervals) of childhood malnutrition across slums and non-slums in selected cities of India, 2005-06

Selected Cities	Stunting		Under weight		Wasting	
	Slum	Non-slum	Slum	Non-slum	Slum	Non-slum
Delhi City	0.367 (0.088,0.618)	0.246 (0.068,0.581)	0.531 (0.049,0.915)	0.375 (0.047, 0.900)	0.141 (0.045, 0.492)	0.168 (0.053, 0.588)
Meerut	0.286 (0.042, 0.705)	0.306 (0.055, 0.748)	0.478 (0.046, 0.823)	0.425 (0.041, 0.834)	0.100 (0.020, 0.408)	0.101 (0.022, 0.471)
Kolkata	0.271 (0.020, 0.711)	0.159 (0.014, 0.679)	0.309 (0.050, 0.824)	0.241 (0.065, 0.762)	0.170 (0.029, 0.580)	0.145 (0.029, 0.279)
Indore	0.505 (0.193, 0.871)	0.380 (0.101, 0.791)	0.409 (0.057, 0.842)	0.296 (0.038, 0.769)	0.331 (0.104, 0.599)	0.294 (0.095, 0.526)
Mumbai	0.343 (0.043, 0.776)	0.266 (0.036, 0.720)	0.458 (0.117, 0.841)	0.407 (0.099, 0.755)	0.159 (0.017, 0.680)	0.186 (0.025, 0.646)
Nagpur	0.422 (0.081, 0.896)	0.286 (0.043, 0.690)	0.467 (0.045, 0.954)	0.272 (0.021, 0.703)	0.193 (0.072, 0.472)	0.157 (0.058, 0.483)
Hyderabad	0.250 (0.040, 0.807)	0.193 (0.032, 0.796)	0.317 (0.039, 0.804)	0.323 (0.042, 0.900)	0.112 (0.015, 0.466)	0.101 (0.017, 0.497)
Chennai	0.322 (0.048, 0.841)	0.210 (0.040, 0.752)	0.274 (0.016, 0.760)	0.246 (0.011, 0.924)	0.236 (0.070, 0.675)	0.184 (0.065, 0.461)

Note: Predicted probability is adjusted for sex of the child, age of the child, birth order and interval, size of child at birth, age of mother, maternal education, household economic status, caste, religion, exposure to media, current working status of mother.

predicted probability (95% confidence interval) for convenience (Table-3). The results reveal that the probability of slum children being stunted, wasted and underweight is higher than non-slums children in almost all selected cities in India. The probability of slum children being underweight is very high in Indore (PP 0.505, CI: 0.193, 0.871), Nagpur (PP 0.422, CI: 0.081-0.896) and Delhi (PP 0.367, CI: 0.088-0.618) than the non-slum children. Note that, in Indore, more than half of the slum children are underweight as compared to one-third of the non-slum children. The result shows a different pattern for Meerut city; the non-slum children are more likely to be underweight as compared to the slum children. This study indicates that slum children are more likely to be undernourished as compared to non-slum children even at similar socioeconomic condition.

Discussion

It is evident in the study that substantial proportions of pre-school children were undernourished in all the selected cities with varying range. The level of stunting is noticeably higher as compared to underweight and wasting among the children below 5 years. Stunting is the indicator of nutrition deficiency. For example, early childhood including the neonatal and infancy feeding practices play a major role in deciding the present stunting status of children (UNICEF, 2009; Ramji, 2009; Shrutha, 2013). Slum areas have higher proportion of undernourished children than the non-slum localities of the cities in India. The multivariate analyses reveal that slum children are more likely to be undernourished than the non-slum children even after keeping other factors constant. This indicates that irrespective of socioeconomic backgrounds, slum children are at higher risk of undernutrition than non-slum children. This reaffirms the role of other factors that have not been included in the analysis, e.g. basic amenities such as presence of proper sewerage, availability of safe drinking water and toilet, physical and environmental conditions in shaping the health and well-being of the children. It is known that slums in cities are deprived of basic amenities like safe drinking water, proper sanitation and drainage system (Prajapati et al., 2011). These are dwellings of the semi-literate or illiterate mothers as compared to the non-slum areas. So given the lack of education among mothers with deficient basic amenities in the locality, the nourishment of the children gets distressed (Sengupta, 2010). Inefficient or complete absence of healthcare infrastructure in and around the slum areas in most of the

selected cities is another major policy hindrance. Moreover, a large section of rural-urban migrants lives in slums, who have severe livelihood, adaptability (with the urban environment) and physiological issues to deal with. There are evidences from developing countries suggesting that chances of child survival among rural-urban migrants are less than that of urban non-migrants (Brockerhoff, 1990; Keshri and Bhagat, 2011). Study on urban India found a glaring gap between migrants and non-migrants in child nutrition and immunization with migrants from rural area being the deprived groups. A large proportion of children of rural-urban migrant mothers are stunted and underweight against urban migrants and natives (Prusty and Keshri, 2013). Besides, there is a need to study the slum and non-slum differentials in health behavior including health seeking behavior.

Conclusion

The National Rural Health Mission (NRHM) since its inception in 2005, inspite of lacunas, has yielded number of positive outcomes by increasing the healthcare utilization and improving the maternal and child health of poor in rural area. This study generates the need with evidence to have similar kind of intervention to address the health issues of children in slums of cities. A holistic approach integrating the nourishment of pregnant and lactating mothers, neonates and infants through food supplements, early detection of childhood diseases and treatment would improve the health status of children in slums. Learning from the experience of National Rural Health Mission with its large scale mismanagement, lack of proper monitoring and supervision, NUHM can overcome the shortcomings.

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New Reproductive Technologies in Urban India and Their Implications on Reproductive Rights of Women

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Abstract

With the lowest ever child sex ratio been recorded since Independence, continuing declining sex ratio has taken a turn for worse. The problem has augmented with increasing use of New Reproductive Technologies (NRTs), mainly in urban areas. It is increasingly becoming a common practice across the country to determine the sex of the unborn child or foetus and eliminate it if the foetus is found to be a female. Without any regard to psychological and physical impacts to women, these techniques have led to sex pre-determination and commercialization of sperms, raising serious socio-legal and ethical questions. This paper attempts to explain the adverse impacts of NRTs on women's rights, which are being violated. It is high time that equal, if not greater, attention be paid to protection of girl child rather than just focussing on conservation of endangered animal species.

Acronym/Abbreviations

CVB: Chorionic Villi Biopsy, GIFT: Gamete Intra Fallopian Transfer, IVF: In Vitro Fertilization, NRR: Net Reproduction Rate, NRTs: New Reproductive Techniques, PBEF: Pre-birth Elimination of Females, ZIFT: Zygote Intra Fallopian Transfer

Introduction

With widespread use of new reproductive technologies (NRTs), the declining sex ratio has taken a new turn in India, particularly in urban areas. NRTs are based on the principle of selection of the desirable and rejection of the unwanted. In India, the desirable is the baby boy and the unwanted is the baby girl. The result is obvious. The Census results of 2011 have revealed that with sex ratio of 914 girls for 1000 boys, India had deficit of 60 lakh girls in age-group of 0-6 years, when it entered the new millennium. While female infanticide was practiced among selected communities, the abuse of NRTs has now become a generalised phenomenon encompassing all communities irrespective of caste, class, religious, educational and ethnic backgrounds. Demographers, population control lobby, anthropologists, economists, legal experts, medical fraternity and feminists are divided in their opinions about gender implications of NRTs. In the context of patriarchal control over women's fertility and commercial interests, NRTs are posing major threat to women's dignity and bodily integrity.

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New Reproductive Technologies (NRTs) and Women

NRTs perform four types of functions: In Vitro Fertilisation (IVF) and subsequent embryo transfer, GIFT (Gamete Intra Fallopian Transfer), ZIFT and cloning assist reproduction.[1] In Mumbai girls are selling their eggs for Rs. 20000. Infertility clinics in Mumbai receive 4-5 calls per day from young women who want to donate their eggs.[2]

Contraceptive Technologies prevent conception and birth. Amniocentesis, chorionic villai Biopsy, needling, ultrasound and imaging are used for prenatal diagnosis.[3] Foetal cells are collected by the technique of amniocentesis and CVB. Gene technologies play crucial role through genetic manipulation of animal and plant kingdoms.[4] Genomics is "the science of improving the human population through controlled-breeding encompasses the elimination of disease, disorder, or undesirable traits on the one hand, and genetic enhancement on the other. It is pursued by nations through state policies and programmes."[5]

It is important to examine scientific, social, juridical, ethical, economic and health consequences of the NRTs. NRTs have made women's bodies site for scientific experimentations.

New Reproductive Technologies in the neo-colonial context of the third world economies and the unequal division of labour between the first and the third world economies have created a bizarre scenario and cut throat competition among body chasers, clone chasers, intellect chasers and supporters of femicide. There are mainly three aspects to NRT: assisted reproduction, genetic or pre-natal diagnosis and prevention of conception and birth. It is important to understand the interaction among NRT developers, providers, users, non-users, potential users, policy makers, and representatives of international organisations.[6]

Assisted Reproduction

The focus of assisted reproduction experts is on the healthy women who are forced to menstruate at any age backed by hazardous hormones and steroids. The processual dimensions involve use of counselors, technodocs and researchers to know the details of personal life of women to delegitimise victim's experience. Utter disregard for woman's pain, carcinogenic and mutagenic implications, vaginal warts, extreme back pain, arthritis, sclerosis, heavy bleeding, growth of hair on face, nose, chin, cheeks, joint pain associated with uterine contractions for production of egg-cells are dismissed as Mood-Swings. Network between stake groups has only one goal–impregnating women for embryo production which in the technodocs' language is assisted reproduction. Embryos and foetuses are used for cure of Parkinson's disease among influential and wealthy aging patriarchs. Side-effects on women's health are totally ignored. Growth of moustache, deformation of teeth and dietary requirements are totally ignored.

Political Economy of Assisted Reproduction

By using phallocentric and misogynist psychologists, psychiatrists, state and the techno-docs (ever ready for plastic smile and neat presentation) have found a ruthless

weapon to cretinise, dehumanise, degrade, humiliate, terrorise, intimidate, and cabbagify women. Through advertisement in newspapers, poor/needy women are asked to lend their womb for IVF on payment of money. Through websites rich clients are sought.

Selective Elimination of Female Foetuses and Selection of Male at a Preconception Stage

Advances in medical science have resulted in sex-determination and sex pre-selection techniques such as sonography, fetoscopy, needling, chorionic villi biopsy (CVB) and the most popular, amniocentesis and ultrasound have become household names not only in the urban India but also in the rural India. Indian mega-cities are the major centers for sex determination (SD) and sex pre-selection (SP) tests with sophisticated laboratories.

There is an official admission to the fact that "it is increasingly becoming a common practice across the country to determine the sex of the unborn child or foetus and eliminate it if the foetus is found to be a female. This practice is referred to as pre-birth elimination of females (PBEF). PBEF involves two stages: determination of the sex of the foetus and induced termination if the foetus is not of the desired sex. It is believed that one of the significant contributors to the adverse child sex ratio in India is the practice of abortion of female foetuses." [7]

China has officially admitted that shortage of young women due to 27 year old 'one child norm' imposed by the state has created a situation where 2.5 million Chinese men are not finding brides! Moreover, trafficking of brides has become a lucrative business in the rural hinterland. Due to economic reforms introduced after 1978, women stopped getting equal wages for equal work. Even old age security from the state was withdrawn. In this situation, Chinese couples found it 'economically unviable' to have daughter as she would bring less wages. If the state allowed them to have only one child, they preferred a male child.

South Koreans adopted sex selection during seventies. By 1986, there was such a shortage of brides in Seoul, capital city, that Federation of Obstetrics and Gynaecological Society of Korea decided that they would not reveal sex of foetus to the pregnant women on the ground of medical ethics. During last 20 years, the sex ratio of Korea has improved to 99.7.

Rapid advances in the field of new reproductive technologies have "created a situation where there has been a breakdown of the moral consensus"[8] with respect to medical ethics and gender justice. Techno-docs refuse to see larger contexts, future implications and gender implications.

Sharp remark of the Member Secretary of Maharashtra State Commission for Women represents the concerns of women's rights organisations in these words, "The attempt at legitimising the vetoing of female life even before it appears, is worse than the earlier abortion related violence in the womb, precisely because it is so sanitised and relies on seemingly sane arguments against the policing of 'human rights' in a democracy in the intensely personal matter of procreation. This needs to be resisted at all cost."[9]

Diametrically opposite views come from Dr. Anniruddha Malpani, the most articulate proponent of sex-preselection tests. When asked, "Is it ethical to selectively discard female embryos?" he said, "Where does the question of ethics come in here? Who are we hurting? Unborn girls?"[10]

Can we allow indian women to become endangered species? The country invests massive resources on protecting the endangered wild life. But now the time has come to launch committed efforts to save the Girl Child.

Population Control Policies

There is a serious need to examine population policies and global funding from the perspective of statisation of Medical Market and marketisation of the nation states in the context of newly emerging culture of daily changes of sponsors. Financial economists have reigned supreme to generate moment-to-moment existence among population so that they can get an unending supply of cannon fodder for the NRT experimentation. Budgetary provision on health has a hidden agenda of NRT. The victims are not given scientific details and by labeling them as parasites and beneficiaries, their consent is not sought. It has burdened women with backbreaking miseries. The nation states have been coached to implement the use of NRT in Secrecy, in line with the programmes executed by G8 in Thailand, Indonesia, Philippines and Bangladesh. To achieve population stabilisation, 2.1% growth rate of population and NRR-net reproduction rate of 1(i.e. mother should be replaced by 1 daughter only) are envisaged. These have inherent sexist bias because it desires birth of 1 daughter and 1.1 sons. Those who support sex-determination (SD) and sex-preselection (SP) view these tests as helpful to achieve NRR1. Recent study of Haryana revealed that out of 160 mothers and grand mothers interviewed by AIIMS study team, 40% supported SD on the ground that it contributed to population control and prevented families from having series of females in an attempt that a male was born.[11]

This will further widen the gap between number of girls and boys in the country. As it is, 100 million women have been missing due to femicide (female infanticide, ill treatment and discrimination leading to higher mortality rate among women/girls in the first three quarters of 19th century and in the last quarter of 19th century due to misuse of SD and SP) over a period of 1901 to 2001.

Gendered Power-relations and NRT

Search for "perfect" baby through genetic screening, ante natal sex determination tests, pre-implantation diagnosis, commercialisation of sperm and/or egg donation, commercialisation of motherhood and hormonal contraceptives raise many socio-legal and ethical questions.

Division of labour among women to control women's sexuality, fertility and labour by utilising homophobia and pitting women of different race, religions, age and looks to suit the interest of NRTs are serving the interest of patriarchy, medical mafia, pharmaceutical industries, scientists, and technodocs at the cost of vulnerable human beings as raw material. If the NGOs don't want to get criminalised, they must dissociate

from NRTs and divert the funding for public health, library, education, skill building, and employment generation as a long-term investment and channelise their energies towards formation of self-help groups.

It is important to understand that reproduction has an individual and a social dimension. While examining birth control practices, an individual is a unit of analysis. While examining the population control policies we have to analyse pros & cons of NRTs, national governments, population control organisations, multinational pharmaceutical industries, public and private funded bodies, medical researchers and health workers who shape women's "choices"–women's autonomy or control at micro and macro levels. Thus choices are not made in vacuum. NRT as a choice for some women (educated career women) can become coercion for others (powerless and less articulate women). Hence it is important to be vigilant about power relations determined by race, age, class and gender while examining implications of NRT on different stake groups.

Informed consent and medical malpractice

Power relations in the medical market favour the technodocs and the clients are not given full details of the line of treatment and its consequences. Respect for diversity, adoption of child/children is a far simpler and more humane solution than subjecting women to undergo infertility treatment. Obsession about creation of designer baby boys has made development agenda subsidiary.

As per International Convention on Population and Development, Cairo 1994, women's reproductive rights constitute "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to reproductive system and to its functions and processes." Rights relating to reproductive and sexual health are:

- Right to life and survival
- Right to liberty and security of a person
- Right to be free from torture, cruel, inhuman and degrading treatment or punishment
- Right to maternity protection
- Right to private and family life
- Right to highest attainable standard of health
- Right to procedural fairness
- Right to benefits of scientific progress
- Right to receive and impart information
- Right to education
- Right to freedom of thought, conscience and religion

Conclusion

Reproductive technologies are violating women's reproductive rights at all levels

- in philosophy as they are based on principle of 'selection' and 'rejection'
- in their approach of seeing women only as raw material for experimentation
- in practice as they violate women's bodily integrity and dignity
- in terms of professional ethics as the providers don't observe 'informed consent' in their obsession of achieving their targets of eugenics or commercial interests.

Reproductive technologies were pioneered in the previous century during Nazi rule in Germany for intensive breeding among 'white, healthy, intelligent, stocky' German women and forcible sterilization of the Jews. At present also, the same logic is used. Globally, pro-natalist policies are promoted for white Anglo-Saxon population and repressive population control policies are imposed on the non-white and poor population.

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Confidentiality and Disclosure in the Practice of Medicine and Healthcare Services

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Abstract

One of the fundamental ethical obligations owed by all health professionals to their patients is that of confidentiality. This duty is also recognised in law, but the health professionals' ethical and legal duty of confidentiality is not absolute since it is balanced by a duty of disclosure under certain circumstances, e.g. under compulsion of law and/or in the public interest. An assessment of what might be a public interest reason to break a confidence will often involve complex decisions and finely balanced judgments. The tension between confidentiality and disclosure is heightened in clinical genetics because of the shared nature of genetic information. If such information is relayed to other family members without appropriate consent, the trust between the patient and health professional may be undermined. Conversely, if the information is withheld from other family members, their interests may be placed in jeopardy. This paper critically examines confidentiality and its nature in doctor-patient relationships.

Acronyms/Abbreviations

GMC: General Medical Council, WMA: World Medical Association, BMA: British Medical Association

Introduction

Confidentiality is central to trust between doctors and patients. Without assurances about confidentiality, patients may be reluctant to seek medical attention or to give doctors the information they need in order to provide good care. But appropriate information sharing is essential to the efficient provision of safe and effective care, both for the individual patient and for the wider community of patients. Confidential medical care is recognised in law as being in the public interest. However, there can also be a public interest in disclosing information: to protect individuals or society from risks of serious harm, such as serious communicable diseases or serious crime; or to enable medical research, education or other secondary uses of information that will benefit society over time. Personal information may, therefore, be disclosed in the public interest, without patients' consent, and in exceptional cases where patients have withheld consent, if the benefits to an individual or to society of the disclosure outweigh both the public and the patient's interest. Health professionals must weigh the harms that are likely to arise from non-disclosure of information against the possible harm, both to the patient and to the overall trust between doctors and patients, arising from the release of that information.

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Health professionals are under a duty to maintain the confidentiality of all information that comes to them in the course of their relationship with patients. The duty protects information created, disclosed or acquired directly or indirectly in the context of the patient and health care provider relationship. All persons, including administrative staff, who come into contact with the information as part of the health care process also have a duty to maintain the confidentiality of that information. The general principle is that the duty of confidence prevents the disclosure of information to individuals and organisations not involved in providing the health care service. However, there are a number of exceptions where otherwise confidential information may be disclosed to third parties. The duty of confidence does not end when the professional relationship with the patient has ceased. Nor does it end with the death of the patient. The duty of confidence can arise by statute, under the common law and in equity.

From an individual's point of view it is extremely important to maintain confidentiality. If confidentiality is not maintained, the individual may be subjected to discrimination due to certain details of their past medical history, for example by insurers or employers. Confidentiality is at the heart of medical ethics and is essential in maintaining trust in the doctor-patient relationship. If patients are able to trust their doctors they are more likely to seek medical help when they need it. Society's interest in maintaining confidentiality is mainly for the same reasons as for individuals. The courts have recognised the public need for confidentiality to be maintained in a number of cases.

Principles of Medical Ethics and Good Medical Practices

Patients have a right to expect that doctors and their staff will hold information about them in confidence, unless release of information is required by law or public interest considerations. Good medical practice involves:

1. Treating information about patients as confidential
2. Appropriately sharing information about patients for their health care, consistent with privacy law and professional guidelines about confidentiality
3. Being aware that there are complex issues related to genetic information and seeking appropriate advice about disclosure of such information.

Medical ethics is a vital part of medical practice, and following an ethical code is an important part of a doctor's job. Ethics deals with general principles of right and wrong, as opposed to requirements of law. A professional is expected to act in ways that reflect society's ideas of right and wrong, even if such behavior is not enforced by law. Often, however, the law is based on ethical considerations.

The original source of a doctor's duty of confidentiality is the Hippocratic Oath. Regarding confidentiality Hippocrates said: 'Whatever, in connection with my professional practice or not in connection with it, I see or hear in the life of men, which ought not to be spoken of abroad, I will not divulge, as reckoning that all such should be

kept secret.' The obligation of confidentiality spoken of here is not absolute; it is up to the doctor to decide what information 'ought not to be spoken abroad.' The principles of medical ethics have developed over time. The Hippocratic Oath,[1] in which medical students pledge to practice medicine ethically, was developed in ancient Greece. It is still used today and is one of the original bases of modern medical ethics. Physicians are obliged to protect the confidentiality of patients including their personal and domestic lives,[2] unless the law requires their revelation, or if there is a serious and identified risk to a specific person and/or community; and notifiable diseases.[3] A contradictory clause requires physicians to ensure that the patient, his relatives or his responsible friends are aware of the patient's prognosis while serving the best interests of the patient and the family.[4] Disclosure of a patient's prognosis should rest with the patient and not the medical attendant.

Another Oath of confidentiality is the Declaration of Geneva which says: 'I will respect the secrets confided in me, even after the patient has died.'[5] Here, however, the obligation is absolute. These are two sources of a doctor's duty of confidentiality which, although they differ in extent, both highlight the importance of respecting the confidentiality of patients.[6] Not only do health-care professionals need to be concerned about how law and ethics impact their respective professions, they must also understand how legal and ethical issues affect patients. As medical technology advances and the use of computers increases, patients want to know more about their options and rights as well as more about the responsibilities of health-care practitioners. Patients want to know how their information is used and the options they have regarding health-care treatments. Patients have come to expect favorable outcomes from medical treatment, and when these expectations are not met, lawsuits may result.

Confidentiality is 'the practice of keeping harmful, shameful, or embarrassing patient information within proper bounds.'[7] It differs from privacy in that it always entails a relationship. Confidentiality in medicine serves two purposes.[8] First, it ensures respect for the patient's privacy and acknowledges the patient's feeling of vulnerability. Secondly, it improves the level of health care by permitting the patient to trust the health professional with very personal information. In 2006, Indian Council of Medical Research published the Ethical Guidelines for Biomedical Research on Human Subjects. The Guidelines outline general principles that should be followed when conducting research on human participants. Principles that protect patients' privacy include: principle of informed consent, principle of privacy and confidentiality, principle of accountability and transparency and principle of compliance.

Confidentiality and Data Protection in Health Services

The principles of confidentiality and data protection underpin health services and give patients the reassurance that their privacy is properly protected. However, these are not so straightforward in the genetics context where the result of a genetic test provides information not just about the patient but also about others.[9] As the scope of genetic testing increases, the management of that information may generate new

challenges for both the patient and the healthcare professional. Patients generally expect professionals to be able to access their health information and rely on their expertise and experience to interpret it so as to advise them wisely. Such information may be personal and private and intrusion into privacy is usually justified by the fact that the patient has authorised it, possibly explicitly but sometimes implicitly within a broader request for advice or treatment. However, the information obtained may enable inferences to be drawn about other family members, whose views may not be known. The information has been generated in circumstances of confidence to one person, but is also of significance to another. Clinical genetic services will often want to use that information to assist the other person but may be unsure whether this is acceptable within the rules of data protection and confidentiality.[10]

Patients have the right to expect that their physicians and other health-care professionals will hold all information about them in strict confidence and disclose it only to those who need, or have a legal right to, the information, such as other attending physicians, nurses, or other health-care workers who perform tasks related to the diagnosis and treatment of patients. A treating physician should not disclose any identifying information about patients to an investigator unless each patient has given consent to such disclosure and unless an ethical review committee has approved such disclosure.

Confidentiality in medicine ensures respect for the patient's privacy and improves health care by enabling the patient to trust the health professional with very personal information. Confidentiality may be breached if required in terms of the law, such as in the case of gunshot wounds, child or other abuse and communicable diseases. Other justifiable exceptions to the confidentiality rule are in an emergency situation, where the patient is incompetent or incapacitated, and in the case of psychiatrically ill patients who need to be committed to hospital. The final reason to breach confidentiality is to protect third parties, whether this is concern for the safety of a specific person or in the public interest. A practitioner shall divulge verbally or in writing information regarding a patient which he or she ought to divulge only—(a) in terms of a statutory provision; (b) at the instruction of a court of law; or (c) where justified in the public interest. Any information other than the information referred above shall be divulged by a practitioner only—(a) with the express consent of the patient; (b) in the case of a minor under the age of 12 years, with the written consent of his or her parent or guardian; or (c) in the case of a deceased patient, with the written consent of his or her next-of-kin or the executor of such deceased patient's estate.

The physician is legally obligated to keep patient information confidential. Therefore, it is necessary that all patient information is discussed with the patient privately and shared with the staff only when appropriate. For example, the billing department will have to see patient records to code diagnoses and bill appropriately. Also, a staff member who has to make an appointment for a patient to get a herpes test at an outside location will need the patient record to do so. Doctors must avoid discussing cases with anyone outside the office, even if the patient's name is not mentioned. Only

the patient can waive this confidentiality right. All patients' records must be kept out of sight of other patients or visitors as well as night staff, such as janitorial service employees. Confidentiality also is required in the handling of test results.

The Tarasoff Case

Prosenjit Poddar was a student from India who enrolled at the University of California, Berkeley. In 1968 he met a fellow student, Tatiana Tarasoff, and began seeing her regularly. However, she told him there was no hope of a serious relationship, and he was shattered by this news. He was very upset and began to follow her around. He sought professional help and saw a psychologist, Dr Lawrence Moore, at the University. In August 1969 he confided to the psychologist that he intended to kill Tatiana. The psychologist informed the campus security who detained Poddar, but then released him as they thought he appeared to be rational. Moore failed to inform Tatiana or her parents that she was in danger. In October 1969 Tatiana returned to the University after a holiday in Brazil, and Poddar killed her. Initially he was convicted of second degree murder, but this ruling was subsequently overturned and he returned to India. Tatiana's parents sued Dr Moore and the University. The majority judicial opinion at the subsequent court case was, 'when a therapist determines... that his patient presents a serious danger of violence to another, he incurs an obligation to use reasonable care to protect the intended victim against such danger.' The judges believed that the therapists could not be exonerated on the grounds that Tatiana was not their patient. The rule of medical confidentiality in this case should be broken in the 'public interest in safety from violent assault.' A dissenting judge believed that violation of confidentiality would negatively impact psychiatric treatment of patients.

Disclosure of Patient's HIV Status

As testing has become cheaper and more widely available, an increasing number of countries are supporting standalone HIV-testing programmes that are coercive or discriminatory, fail to confidentiality, and do not provide access to preventive information or treatment. Governments are also failing to address widespread stigma faced by those testing positive and are increasingly adopting or strengthening laws criminalizing HIV transmission. These laws are often arbitrarily applied and are ineffective at preventing HIV transmission.[11] Most HIV infected countries have established voluntary counseling and testing centres where persons may go to be tested for HIV after being counseled. For this intervention to be acceptable, it is necessary that persons seeking testing be assured of confidentiality and are advised appropriately. Today the big need is to make a harmonious balance between the AIDS patients' right to confidentiality and the social right to prevent this dreaded disease through mandatory testing policy. All HIV-related policies must reflect sensitivity to the specially confidential nature of HIV-related information. The law strictly regulates disclosure of such information because of the powerful potential for social stigma of wrongful disclosure.[12] Such disclosure can result in violations of confidential rights, discrimination, invasion of privacy, and actions alleging intentional or negligent infliction of emotional distress. Significant consequential damage can result from

wrongful disclosures because of the special capacity of HIV information to lead to loss of job, loss of insurance, eviction from houses, and even the loss of friends and family.

Right to privacy is not an absolute right in India. In Mr. 'X' v. Hospital 'Z',[13] in which the respondent hospital had disclosed the HIV positive status of the appellant, on which basis the marriage of the appellant which was settled, was called off after this revelation. The appellant challenged the disclosure before the National Human Rights Commission and after dismissal of his petition by the Commission, then before the Supreme Court. The appellant contended that the respondent hospital had violated the duty of confidentiality by disclosing his HIV-positive status. The Supreme Court observed that even the Code of medical ethics carved out an exception to the rule of confidentiality and permitted the disclosure in certain circumstances 'under which public interest would override the duty of confidentiality, if any, vested in the appellant was enforceable in the present situation, as the proposed marriage carried with it the health risk from being infected with the communicable disease from which the appellant suffered.' The Supreme Court observed that one of the basic human rights, the right to privacy was not treated as absolute and was subject to such action as may be lawfully taken for the prevention of crime or disorder or protection of health or morals or protection of rights and freedoms of others. The Court dismissed the appeal and observed:

> Since 'Right to Life' included right to lead a healthy life so as to enjoy all facilities of the human body in their prime condition, the respondents, by their disclosure that the appellant was HIV-positive, cannot be said to have in anyway, either violated the rule of confidentiality or the right of privacy. Moreover, where there is a clash of two fundamental rights, as in the instant case, namely, the appellant's right to privacy as part of right to life and Ms. "Y's" right to lead a healthy life which is her fundamental right under Article 21, the RIGHT which would advance the public mortality or public interest, would alone be enforced...

In M. Vijaya v. Chairman and Managing Director, S.C.C. Ltd.,[14] the Full Bench of the Andhra Pradesh High Court rightly observed:

> There is an apparent conflict between the right to privacy of a person suspected of HIV not to submit him forcibly for medical examination and the power and duty of the state to identify HIV-infected persons for the purpose of stopping further transmission of the virus. In the interest of the general public, it is necessary for the state to identify HIV-positive cases and any action taken in that regard cannot be termed as unconstitutional as under Article 47 of the Constitution, the state was under an obligation to take all steps for the improvement of the public health. A law designated to achieve this object, if fair and reasonable, in our opinion, will not be in breach of Article 21 of the Constitution of India.

In the only case in South African law that examined the issue of disclosure by a doctor of a patient's HIV status without his consent, Jansen van Vuuren and another v.

Kruger,[15] in which the Appellate Division of the Supreme Court ruled that a doctor may not disclose his patient's HIV status to other doctors without consent unless there is a clear legal duty to do so. The case revolved around Dr Kruger disclosing his patient's HIV-status to colleagues during a game of golf. None of the professionals to whom he disclosed the information was treating the patient at the time.

Issues of Confidentiality in Genetic Research

One issue that arises is whether a physician or other health professional providing genetic testing services should be permitted without the patient's consent or over their objection to reveal test results (or even the fact that a patient has sought genetic counselling or testing) to third parties. The rule is no different than for medical information in general: confidential information that can be linked to an identifiable patient should be disclosed without the patient's authorisation only when necessary to protect third parties from harm or when disclosure is compelled by law (e.g., reporting HIV test results to public health officials). The question then is: When is disclosure of genetic information permitted in order to protect third parties from harm?

This section explores the issues involved in taking a family history and in the giving and sharing of genetic information and samples. Here we would outline and examine relevant recent changes in legislation, in particular the implementation and impact of two major pieces of legislation in the United Kingdom, the Human Tissue Act 2004 and the Mental Capacity Act 2005, as well as relevant aspects of the Data Protection Act 1998. The guidance also takes account of the revised General Medical Council (GMC) guidance on consent and confidentiality and the House of Lords Science and Technology Committee Inquiry on Genomic Medicine (2009).[16] Throughout this document, the underlying ethical and legal principles are illustrated using hypothetical (but based on real) clinical cases to highlight key points. Each case should be judged on its own facts, as the clinical scenarios are intended to guide rather than dictate practice.

A significant number of critics who maintain that genetic information should remain confidential point to historical abuses: involuntary sterilisation of people with mental retardation around the turn of the century, and Nazi abuse and misrepresentation in pursuit of eugenic goals.[17] Fear that knowledge of one's genetic make-up and predisposition will stigmatise the person affected and his/her family, causing diminished or lost employment opportunities and denial of insurance coverage as well as an undesirable invasion of privacy are frequently voiced concerns.[18] Moreover, many at-risk individuals may forego genetic testing because they fear denial of future employment opportunities.

The genetic technological revolution has been both a blessing and a curse. The technology can facilitate research, screening, and treatment of genetic conditions, but it may also permit a reduction in privacy through its capacity to inexpensively store and decipher unimaginable quantities of highly sensitive data.[19] The U.S. Congress has funded the Human Genome Project: a three-billion-dollar initiative aimed at mapping and sequencing the entire human genome.[20] One of the Project's ultimate goals is to cure genetic disease. A broader objective is the use of that information to understand the

disease process in general.[21] According to Gostin, "Science has the capacity to store a million fragments of DNA on a silicon microchip. Each DNA chip is loaded with information about human genes. When a component of a patient's blood is placed on the chip, it reveals specific information about the individual's health and genetic composition, potentially ranging from a carrier state or a future disease, to genetic relationships."[22]

An investigator who proposes to perform genetic tests of known clinical or predictive value on biological samples that can be linked to an identifiable individual must obtain the informed consent of the individual or, when indicated, the permission of a legally authorised representative. Conversely, before performing a genetic test that is of known predictive value or gives reliable information about a known heritable condition, and individual consent or permission has not been obtained, investigators must see that biological samples are fully anonymised and unlinked; this ensures that no information about specific individuals can be derived from such research or passed back to them.

Issues of Consent in Clinical Genetic Practice

The process of seeking consent ensures that a person understands the nature and purpose of a procedure and the practice has its origin in the ethical principle that a person has a right to self-determination. In legal terms, consent is valid only if three questions are satisfied:

- Is the patient competent?
- Was the person giving consent appropriately informed beforehand?
- Was the consent voluntarily given?

Consent is valid only if the implications of a procedure are disclosed and understood, but it is the complexity of these implications that poses a particular challenge in clinical genetic practice. Can such consent ever be fully informed? What constitutes sufficient information? How much can a patient be expected to weigh up the emotional consequences of a particular result, to the extent that they can be said to fully understand its implications? Genetic information can be upsetting to individuals and may have collateral consequences, for example, fear of discrimination or stigmatisation. In addition, results of genetic tests are frequently of significance to the patient's relatives, but the patient may not want others to know about their genetic make-up. Given these complexities, and the fact that competence is decision-specific, what is the bar for determining competence? Is it realistic to expect patients to weigh up all these issues before consenting to genetic testing? If insufficient consideration is given to such implications, then the validity of their consent becomes questionable. This tightrope must be carefully navigated based on the individual circumstances of the case.

In addition to consent for the test itself, it may be appropriate to include discussion of the following as part of the consent process, particularly since these additional aspects are often not routine for other types of tests or procedures:

- Consent to disclosure of relevant genetic information to relatives
- Consent to research
- Consent to the storage and future use of the sample.

Disclosing Records for Financial and Administrative Purposes

As a general rule, the doctor should seek a patient's express consent before disclosing identifiable information for purposes other than the provision of their care or local clinical audit, such as financial audit and insurance or benefits claims. If doctors are asked to disclose information about patients for financial or administrative purposes they should, if practicable, provide it in anonymised or coded form, if that will serve the purpose. If identifiable information is needed, they should, if practicable, seek the patient's express consent before disclosing it. They must draw attention to any system that prevents them from following this guidance, and recommend change. Until changes are made, they should make sure that information is readily available to patients explaining that their personal information may be disclosed for financial, administrative and similar purposes, and what they can do if they object. If a patient asks, the doctor should explain the nature and purpose of disclosures made for financial and administrative purposes. The doctors should do their best to act on any objections. If he is satisfied that it is not possible to comply with the patient's wishes, and still provide care, they should explain this to the patient and explain their options. The doctor should satisfy himself that anyone who will have access to the information is bound by a duty of confidentiality not to disclose it further.

Disclosing Information about Serious Communicable Diseases

In this guidance the term 'serious communicable disease' applies to any disease that can be transmitted from human to human and that can result in death or serious illness. It particularly applies to, but is not limited to, HIV, tuberculosis, and hepatitis B and C.

The doctors may disclose information to a known sexual contact of a patient with a sexually transmitted serious communicable disease if they have reason to think that they are at risk of infection and that the patient has not informed them and cannot be persuaded to do so. In such circumstances, the doctors should tell the patient before they make the disclosure, if it is practicable and safe to do so. They must be prepared to justify a decision to disclose personal information without consent.

There are many circumstances in which a doctor might be asked to disclose information, either following an examination of a patient or from existing records, and in which they face 'dual obligations'. Usually, dual obligations arise when a doctor works for, is contracted by, or otherwise provides services to:

(a) a patient's employer (as an occupational health doctor);

(b) an insurance company;

(c) an agency assessing a claimant's entitlement to benefits;

(d) the police (as a police surgeon);

(e) the armed forces;

(f) the prison service; or

(g) a sports team or association.

If any doctor is asked to provide information to third parties, such as a patient's insurer or employer or a government department or an agency assessing a claimant's entitlement to benefits, either following an examination or from existing records, the doctor should: (a) be satisfied that the patient has sufficient information about the scope, purpose and likely consequences of the examination and disclosure, and the fact that relevant information cannot be concealed or withheld; (b) obtain or have seen written consent to the disclosure from the patient or a person properly authorised to act on the patient's behalf, the doctor may accept an assurance from an officer of a government department or agency or a registered health professional acting on their behalf that the patient or a person properly authorised to act on their behalf has consented; (c) only disclose factual information the doctor can substantiate, presented in an unbiased manner, relevant to the request; so he should not usually disclose the whole record, although it may be relevant to some benefits paid by government departments and to other assessments of patients' entitlement to pensions or other health-related benefits; and (d) offer to show his patient, or give them a copy of, any report he writes about them for employment or insurance purposes before it is sent, unless: (i) they have already indicated they do not wish to see it (ii) disclosure would be likely to cause serious harm to the patient or anyone else (iii) disclosure would be likely to reveal information about another person who does not consent.

Disclosures in the Public Interest

There is a clear public good in having a confidential medical service. The fact that people are encouraged to seek advice and treatment, including for communicable diseases, benefits society as a whole as well as the individual. Confidential medical care is recognised in law as being in the public interest. However, there can also be a public interest in disclosing information: to protect individuals or society from risks of serious harm, such as serious communicable diseases or serious crime; or to enable medical research, education or other secondary uses of information that will benefit society over time.

Before considering whether a disclosure of personal information would be justified in the public interest, the doctor must be satisfied that identifiable information is necessary for the purpose, or that it is not reasonably practicable to anonymise or code it. In such cases, the doctor should still seek the patient's consent unless it is not practicable to do so, for example because:

(a) the patient is not competent to give consent, in which case the doctor should consult the patient's welfare attorney, court-appointed deputy, guardian or the patient's relatives, friends or care takers,

(b) the doctor should have reason to believe that seeking consent would put him/her or others at risk of serious harm;

(c) seeking consent would be likely to undermine the purpose of the disclosure, for example, by prejudicing the prevention or detection of serious crime, or

(d) action must be taken quickly, for example, in the detection or control of outbreaks of some communicable diseases, and there is insufficient time to contact the patient.

The doctors should inform the patient that a disclosure will be made in the public interest, even if he/she has not sought consent, unless to do so is impracticable, would put him/her or others at risk of serious harm, or would prejudice the purpose of the disclosure. The doctors must document in the patient's record their reasons for disclosing information without consent and any steps they have taken to seek the patient's consent, to inform them about the disclosure, or their reasons for not doing so.

International Ethical Guidelines

Medical law plays an important role in medical facility procedures and the way we care for patients. We live in a litigious society, where patients, relatives, and others are inclined to sue health-care practitioners, health-care facilities, manufacturers of medical equipment and products, and others when medical outcomes are not acceptable. It is important for a medical professional to understand medical law, ethics, and protected health information.

The World Medical Association (WMA) was founded in 1947 to represent physicians and to promote medical ethics and professional freedom worldwide. In 1948, WMA issued the Declaration of Geneva the first international document stating the ethical duties of physicians to their patients. The Declaration consists of a physician's oath: 'Not to use my medical knowledge contrary to the laws of humanity and an undertaking to practice my profession with conscience and dignity; the health of my patient will be my first consideration'. The Declaration of Geneva was followed by the adoption of the first International Code of Medical Ethics in 1949.[23] The 1949 Code contains a brief statement of doctor's duties, which include an obligation among others to 'complete loyality to the patient', absolute secrecy on all he knows about his patient' and a list of practices relating to conflicts of interest. The international Code was amended twice in 1968 and 1983.[24] The 1983 revision of the Code also introduces a requirement that the rights of patients and colleagues shall be respected.

There are many international conventions that regulate medical practice globally and India being a member of the international community is a party to many of these conventions. In the last decades, however, it is the pace of scientific advances in the application of biotechnologies which has forced a global and international revision of ethical and legal controls in biomedicine, particularly in the field of research involving human subjects.[25] The evolution of the Declaration of Helsinki is set against the global growth of the bioethics movement, its impact on public policy and the emergence of national and international bioethics committees to regulate biomedical researches. Also, worthy of note are the Tokyo Declaration of 1975, the Sydney Declaration of 1968, and the Oslo Declaration of 1970. All these declarations basically deal with ethical issues in the practice of medicine, and provide ethical guidelines for medical practitioners.

The I974 BMA handbook on Medical Ethics boldly reaffirms the doctor's obligation to maintain secrecy in what appear to be most uncompromising terms:

It is a doctor's duty strictly to observe the rule of professional secrecy by refraining from disclosing voluntarily to any third party, information which he has learned directly or indirectly in his professional relationship with the patient. The death of the patient does not absolve the doctor from the obligation to maintain secrecy.[26]

However, there immediately follows a list of five kinds of exception. The exceptions to the general principle are:

a) the patient or his legal adviser gives valid consent,

b) the information is required by law,

c) the information regarding a patient's health is given in confidence to a relative or other appropriate person, in circumstances where the doctor believes it undesirable on medical grounds to seek the patient's consent,

d) rarely, the public interest may persuade the doctor that his duty to the community may override his duty to maintain his patient's confidence;

e) information may be disclosed for the purposes of any medical research project specifically approved for such exception by the BMA including information on cancer registration.[27]

Therefore, be it resolved that the 27th World Medical Assembly reaffirm the vital importance of maintaining medical secrecy not as a privilege for the doctor, but to protect the privacy of the individual as the basis for the confidential relationship between the patient and his doctor; and ask the United Nations, representing the people of the world, to give to the medical profession the needed help and to show ways for securing this fundamental right for the individual human being.[28]

Article 8 of the European Convention on Human Rights, recognises that the value of privacy needs to be balanced against the rights and freedom of others. It may be acceptable to interfere with such privacy provided that the interference is proportional to the protection afforded to others. Such balancing acts may be difficult and healthcare professionals may be uncertain in which circumstances certain disclosure actions are legitimate. This report can only provide guidance, but aims to indicate what current acceptable practice might be.

Conclusion

Confidentiality and privacy are essential to all trusting relationships, such as that between patients and doctors. Moreover, in a healthcare context, patient confidentiality and the protection of privacy is the foundation of the doctor-patient relationship. As one of the basic human rights, the right of confidentiality in medicine is not treated as absolute and is subject to such action as may be lawfully taken for the protection of health or morals or protection of rights and freedoms of others. As already discussed above, doctor-patient relationship, though basically commercial, is, professionally, a

matter of confidence and, therefore, doctors are morally and ethically bound to maintain confidentiality. In such a situation, public disclosure of even true private facts may amount to an invasion of the right of privacy which may sometimes lead to the clash of person's "right to be let alone" with another person's right to be informed.

The ethical jurisprudence in India on medical privacy and confidentiality has primarily evolved, like many other areas of privacy law, through judicial pronouncements given in specific circumstances. The judiciary not only talks about privacy rights in the medical arena but also juxtapose this right with others, such as the right to privacy of infected individuals vis-a-vis the right to protect non-infected persons. The right to privacy is considerably essential for persons living with HIV/AIDS due to the potential stigmatizing and discriminatory impact. Consequently, lack of privacy rights fuels the spread and exacerbates the impact of the disease. Fears emanating from a privacy breach or of disclosure that deter people from getting tested, seeking medical care and treatment include: low self esteem, fear of loss of support from family/peers, loss of earnings especially for female and transgender sex workers, fear of incrimination for illicit sex/drug use.

The responsibility of the healthcare professional involves both patient confidentiality and good communication with members of the healthcare team. It is important that patient confidentiality be respected and discretion exercised as to what information should be disclosed. All members of the healthcare team need to realise that this information should be used only for promoting patient care and that confidentiality should be breached only under exceptional circumstances.

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Voluntary Health Association of India

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Abstract

Voluntary Health Association of India (VHAI) has a macro-national perspective in addressing significant health and development issues. While successfully promoting the horizons of health at national and international fora in the past four decades, VHAI has also been involved in health research, capacity building and networking. The main objective of this non-profit organization is to ensure a cost-effective, preventive, promotive and rehabilitative health care system in India. A federation of 27 state health associations, it is one of the largest health and development networks in the world. VHAI is an acceptable voice and significant presence with its proactive networking with global agencies on health and development concerns.

Acronyms/Abbreviations

ASHA: Accredited Social Health Activist, COTPA: Cigarettes and Other Tobacco Products Act, FNGO: Field Non-Government Organization, ICDHI: Independent Commission on Development and Health in India, IUHPE: International Union for Health Promotion and Education, MNGO: Mother Non-Government Organization, RCH: Reproductive Child Health, RECPHEC: Resource Center for Primary Health Care, RRC: Regional Resource Centre, SVHA: State Voluntary Health Association, WHO: World Health Organisation

Making Health a Reality for the People of India

Voluntary Health Association of India (VHAI) is a non-profit, registered society formed in the year 1970. It is a federation of 27 State Voluntary Health Associations, linking together more than 4500 health and development institutions across the country. It is one of the largest health and development networks in the world. VHAI advocates people-centered policies for dynamic health planning and programme management in India. It initiates and supports innovative health and development programmes at the grassroots with the active participation of the people.

VHAI strives to build up a strong health movement in the country for a cost-effective, preventive, promotive and rehabilitative health care system. It works towards a responsive public health sector as well as private sector with accountability and quality service. VHAI also promotes human rights and development. The beneficiaries of VHAI's programme include health professionals, researchers, social activists, government functionaries and media personnel.

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Policy Intervention, Knowledge Development and Advocacy

Voluntary Health Association of India has successfully promoted the concept of broadening the horizons of health at national and international level. VHAI finds representation in international agencies like WHO, World Bank, International Union for Health Promotion and Education, Asian Development Bank, York University, European Union, etc. The organization is also having a significant presence in the Advisory Committees of several national and government bodies such as National AIDS Control Board, Task Force on Tobacco Control, National Disaster Management Authority, National Nutrition Mission and National Policy for Children. VHAI is also a member of Advisory Group on Community Action under the National Rural Health Mission and Common Review Mission of NRHM.

Policy Intervention, Knowledge Development and Advocacy (International Level)

- WHO-SEARO and VHAI have signed a Memorandum of Understanding to ensure collaborative efforts in the South East Asia Region. South-East Asia Primary Health Care Innovations Network (SEAPIN), constituted by WHO-SEARO, which has been in operation since August 2010, has its Secretariat at VHAI since 2013. The Chief Executive, VHAI is the Convener of this initiative.
- The Chief Executive is a Member of the Board of Trustees, International Union for Health Promotion and Education (IUHPE), Paris. He also continues to be a Member of the Expert Advisory Committee of the European Union supported project on "Research and Development for a new methodology to evaluate and monitor health related EU-funded interventions in partner countries (EVAL–Health)".

Policy Intervention, Knowledge Development and Advocacy (National Level)

VHAI has an acceptable voice in the central and state governments and considers it of prime importance to conduct serious action research on various health and development concerns.

Independent Commission on Development and Health in India (ICDHI)

VHAI facilitated the setting up of ICDHI in 1995, as a people's initiative to assess the current health and development status and facilitate the process of need-based and people-centric sustainable development and health. The Commission consists of distinguished persons from the health and development sectors. At least 25 well-researched monographs on various current health and development issues have been published by eminent social scientists since 1998. In recent times, ICDHI has deliberated on issues such as "Task Force on State of Vector Borne Diseases Control Programme in India and the Future Challenges", "Restructuring of the Ministry of Health & Family Welfare to create a new Department of Public Health which will look into prevention, promotion and disease control aspects", "Understanding the Realities of the National Rural Health Mission", "Review of the Report of the High Level Expert Group on Universal Health Care" among others.

VHAI in collaboration with York Institute for Health Research, York University, Canada, implemented a research project, entitled "Health and Empowerment through better sanitation: Promoting awareness at the grassroots level" in the State of Rajasthan.

Capacity Building

Capacity building and need-based programmes for SVHAs and other NGOs take place on regular basis. This has empowered NGOs and local organizations to take up issues at their level and address the needs of the people more comprehensively. VHAI's experience based learning over the years has given it the credibility to build the capacity of NGOs and local grassroots organizations on relevant issues, with clarity and conviction. VHAI advocates a more proactive role of NGOs in the process of development which is reflected in its own capacity-building initiatives. Focus areas for capacity-building programmes are women's health and development issues including female foeticide, gender sensitization, unsafe abortions, reproductive child health (RCH), community health and development, communicable and vector-borne disease control (Malaria, Tuberculosis, Kala-Azar, Japanese Encephalitis, etc), adolescent health and concerns, Indian system of medicine, HIV/AIDS, health promotion and non-communicable disease control.

Networking

VHAI is one of the largest health and development networks in the world. VHAI networks proactively on health and development concerns with national and international agencies such as:

- 27 State Voluntary Health Associations (SVHAs), 4500+ grassroot organisations and more than 1,20,000 village health workers
- Central and State Governments
- UN agencies (WHO, UNFPA, UNICEF, UNDP, UNIFEM, etc.)
- Global agencies (World Bank, Department for International Development (DFID), International Union for Health Promotion and Education (IUHPE), Asian Development Bank, European Commission)
- International and National NGOs (Hesperian Foundation, Sasakawa Peace Foundation, Jan Swasthya Kendra, RECPHEC, VHSS, etc.)
- Development activists and associates in India and abroad

Health Promotion

Health promotion is an organized way of enabling people to have greater control over their health. Health promotion not only involves the prevention of disease, but seeks to go beyond.

VHAI launched its health promotion programme in March 2006 and started the first phase in Delhi and the states of Kerala, Orissa, Andaman and Nicobar Islands, Jammu and Kashmir and West Bengal. More states like Goa, Sikkim, and Arunachal Pradesh soon joined in. The programme covered government and private schools and communities. Health promotion activities comprise awareness campaigns, capacity

building workshops among students, teachers and parents and community health workers; interactive sessions, surveys, formation of health corners, quiz sessions, health melas, sports events and involvement of local celebrities and role models. The team at Delhi and the state teams in different settings have also developed different types of information, education and advocacy materials like books, periodicals, posters, stickers, traditional games, questionnaires, and information dossiers on health promotion.

Tobacco Control

VHAI is one of the first few organizations working on tobacco control both at policy and grassroots levels. The issue has always been a crucial public health concern for VHAI and the organization has been one of the pioneers in tobacco control at the national, state and district level. In the last five years, it has been working on a comprehensive tobacco control programme supported by the Bloomberg Initiative. J&K, Assam, Andhra Pradesh, Himachal Pradesh, Madhya Pradesh, Rajasthan, Odisha and Uttar Pradesh are some of the states where VHAI has been at the forefront of tobacco control campaigns along with its state partners.

The key focus areas in VHAI's Tobacco Control campaign are policy, political, legal and media advocacy. It also includes close working with the Ministry of Health and Family Welfare on the 12th Five Year Plan to strengthen National Tobacco Control Programme and the NCD programme; high level advocacy at state-level to seek commitment for tobacco-free states; creating smoke-free settings, district level advocacy for effective implementation of Cigarettes and Other Tobacco Products Act (COTPA), legal advocacy, research and advocacy on alternative livelihoods for *bidi* and tobacco workers, lobbying with enforcement agencies, reporting of legislative violations, coalition-building and development of advocacy materials.

The programme's main successes can be attributed to capacity building of state partners, coordinated efforts with other civil society organizations, effective representations to policymakers, pro-active media advocacy and government interventions through timely notifications. Some of the key achievements include successful advocacy for raise in tobacco taxes in several states, effective legal advocacy for implementation of pictorial health warnings, working with civil society to advocate for ban on *gutka*, declaration of smoke free jurisdictions, primary research on *bidi* workers and pro-active media advocacy to build favourable public opinion on tobacco control issues.

Reproductive Child Health

Regional Resource Centre (RRC): The Ministry of Health & Family Welfare, Govt. of India in 1997 launched a comprehensive reproductive child health programme in partnership with the NGO sector to reach the underserved and inaccessible population of the country. VHAI and other national level NGOs were designated as Regional Resource Centres (RRCs). VHAI started formally functioning as a Regional Resource Centre (RRC) in January 2002. Since April 2005, RRC-VHAI has been responsible for the states of Rajasthan, Uttarakhand, Delhi, Jammu & Kashmir with 51

MNGOs and 212 FNGOs under its ambit. The emphasis is on a decentralized approach with most functions, except technical support being relegated to the state governments. Since inception, VHAI-RRC has been a focal point for NGOs to address needs for capacity building, networking and strengthening partnerships with state governments and district authorities. It acts as an enabling mechanism for sharing experiences by documenting and disseminating successful approaches, learning and innovations in RCH service delivery in its Bilingual newsletter, Abhilasha and community mobilization processes. It also conducts periodic evaluation and assessment by conducting field visits to assess the effectiveness of technical support and training inputs. Another major key functioning of RRC is interacting and sharing through RRC-VHAI website (www.vhai-rrc.org).

Unite for Body Rights Sexual and Reproductive Health Rights Programme

The SRHR programme supported by Simavi, Netherlands and the Dutch Alliance is operational in two blocks in Odisha-Kujang in Jagatsinghpur and Kahlikote in Ganjam district. The objectives are:

- To strengthen the capacity of civil society organizations in sexual and reproductive health and rights, sexual diversity issues, sexual and gender-based violence, gender issues, meaningful participation of target groups, especially, young people, advocacy, networking, capacity building and public awareness, project monitoring, evaluation, learning and research.
- To strengthen sexual and reproductive health rights education in formal and informal settings.
- To strengthen sexual and reproductive health services through capacity building of frontline workers, referrals, advocacy and demand generation.
- To work towards an enabling environment for sexual and reproductive health and rights through advocacy, capacity building and awareness generation.

State VHAs

VHAI is a federation of 27 State Voluntary Health Associations (SVHAs). In a large and culturally diverse country like India, VHAI's representation at the state level enables it to have macro-national perspective in addressing important health and development issues. Further, this state-level network helps VHAI to respond to concerns at the micro-level as well. The Chief Executive's Office at VHAI maintains regular communication with all the state partners. It keeps updated records of the Board, Constitution, membership, member institutions, programmes and all other organizational matters of each State VHA.

VHAI also facilitates the formation of newer SVHAs in collaboration with active NGOs in the concerned states. VHAI ensures a constant communication with all the state partners and other leading NGOs all over the country. We assist SVHAs to plan and manage their activities through joint programmes like Intesified Malaria control Programme, Social mobilization and service delivery programme for malaria control and kala-azar elimination, Tuberculosis Prevention, Tobacco Control. Trainings and

technical inputs are also provided to make them sustainable and be able to extend their outreach to remote and neglected areas. Also involving them in innovative programmes like Khoj projects and strengthening the Village Health Workers' Network, VHAI is making an effort to accomplish its goal.

Communicable Diseases

Malaria Control

The Malaria Control Project supported by Global Fund is based on a public-private partnership model involving NGOs of national and regional repute. VHAI is one of the partner organizations and the project is currently operational in 1074 villages of 13 high malaria endemic districts in the North Eastern States of Assam, Meghalaya, Arunachal Pradesh, Tripura, Manipur, Mizoram and Nagaland. The goal is to reduce malaria-related morbidity and mortality to 30% by 2015 as compared to 2008.

In addition to updating government information manuals focusing on malaria for health workers, other activities include distributing long-lasting insecticidal nets, capacity-building of health workers in rapid diagnosis, treatment as per programme guidelines and training of ASHAs in malaria prevention and control.

Social mobilization and service delivery programme for malaria control and Kala-azar elimination amongst vulnerable communities under World Bank project

This World-Bank supported programme was initiated in February 2011. Initiated with support from Ministry of Health and Family welfare, Government of India, the objective is to strategize, plan, and manage: (i) social mobilization to foster increased and sustained demand for timely and appropriate preventive and curative services; (ii) delivery of timely and quality preventive and curative services in project high endemic districts and (iii) to build capacity of the peripheral health workers involved in malaria control/ kala-azar elimination to sensitize on the needs of vulnerable communities.

The project is currently operational in seven states; Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha and West Bengal. Based on the program objective, activities categorized are mainly two types: (i) social mobilization (ii) service delivery both for the Malaria and Kala-azar states.

Tuberculosis Prevention

Project Axshya adds a new dimension to TB prevention and control in India through community ownership and civil society-led public health programming. The project aims at improving the reach, visibility and effectiveness of the Revised National Tuberculosis Control Programme through civil society support in 374 districts across 23 states by 2015. VHAI as one of the partner organisations has an outreach across 36 districts in 8 states of India–Madhya Pradesh, Punjab, Uttar Pradesh, Jammu & Kashmir, Goa, Manipur, Rajasthan and Bihar. A strong network has been developed with the existing government programme along with increase in patient outreach. Ground-level awareness programmes conducted through community events have created demand for health services in many unreached pockets and urban slums. Creation of key social change agents and NGOs is a siginificant outcome of the programme.

Disaster Preparedness, Response and Management

VHAI's response to major calamities in India, whether natural or man-made, has been immediate and far reaching. The approach has been holistic, focussed on livelihood restoration, health care and capacity-building of the community, self-help, coordination and networking. In case of any calamity, VHAI's disaster-management team, comprising health/medicine specialists, logisticians, social workers and volunteers immediately reaches the disaster site and actively participates in the relief and rehabilitation measures. VHAI's efforts towards the sustainable rehabilitation and overall development of the communities, for more than a decade after Indian Ocean tsunami, Gujarat earthquake, Orissa super cyclone, Kashmir earthquake, Bhopal gas tragedy, have received high appreciation from the various stakeholders. Although disasters cannot be mitigated, VHAI's presence in the disaster-affected communities did help reduce the sufferings and initiate a long-term development programme in the affected zones.

As a sustainability measure, there have been all-out efforts towards the capacity-building of the community, enabling them to manage all development initiatives with little or no support and assisting them in turning the disaster into development.

APARAJITA - A disaster relief and rehabilitation initiative

Aparajita, a long term relief and rehabilitation project for fisher-folk, artisans and other victims was initiated soon after the super cyclone in Orissa in 1999. Aparajita was inspired by the indomitable spirit and collective efforts of the people, to survive.

Aparajita, Gujarat was initiated following the 2001 massive, devastating earthquake. So far, thousands of families have benefited from the project.

Aparajita, Andaman: Under the same name Aparajita, a relief, rescue and rehabilitation programme was launched after the devastating Indian Ocean earthquake and subsequent tsunami waves in 2004. The focus of the relief efforts has been the little Anadaman Island, especially the Hut Bay area, which is the most severely affected island in the Andaman group of Islands. VHAI is working with approximately 4000 affected families with activities focussed on the spheres of health, education and livelihoods.

Development Communications

The Development Communication division at VHAI has been producing communication materials and health-oriented publications for nearly four decades. Over the years, the division has earned credibility for itself in developing user-friendly, topical, comprehensive health packages, which include books, research reports, manuals and handbooks, documentary films and other forms of audio-visual material. VHAI publications cater to parliamentarians, policymakers, public health and healthcare professionals at one level as well as peer educators, health workers, adolescents, hospital administrators, counselors, teachers, women and children on the other. The experience gathered from various programme interventions across India over the last few decades has enabled VHAI to develop, specific, need-based publications in the local context.

Contributors to VHAI publications are distinguished public health experts as well as noted researchers and academicians. The publications are user-friendly, attractive in style, layout, low-priced and easily accessible. VHAI publications are also widely translated and adapted in regional Indian languages by State Voluntary Health Associations (SVHAs) for further use and dissemination. The VHAI outreach spreads several pockets of India where communities are in need of information on health and development issues.

Landmark publications

Where There is No Doctor; Where Women have No Doctor; State of India's Health; Health Promotion in India; National Profile on Women, Health and Development; Report of The Independent Commission on Health in India; Aparajita - A Film on the Adolescent Girl; Hamari Chitthi Aapke Naam - Newsletter for Health Workers; Your Guide to Heart Disease; Healthcare and Patients' Rights; Living a Healthy Lifestyle Starts Today: A Guide for Adolescents; The Rainbow Tower of Food and Fun; Your Guide to Oral Health and Hygiene

Films for Change International

Film for Change is an in-house initiative of VHAI. The objective is to produce films that capture social issues of concern in a popular format. It aims to bring together people who are committed to human and universal development and who have faith in the medium of films as a vehicle of social change. It provides them with a platform to work together in solidarity towards a better world. Over the last 15 years, the Films for Change have perfected the amalgamation of information, entertainment and message of social change through various films and documentaries.

- **'ANANT'** a Tele-film on the lives of four HIV positive patients.
- '**Aparajita'** – on adolescence and associated issues.
- **'KASBA'** and **'SHIELA'** – stories of a woman's struggle in a male-dominated society
- A political documentary, **'DISTANT THUNDER'** on the problems of insurgency in the North-East.
- A Documentary film **'Paths are Made by Walking'** produced by VHAI was also the curtain raiser at the 6th Global Conference on Health Promotion held in Bangkok.
- Another documentary film **'Turning their Lives to Ashes'** on the lives of bidi workers by VHAI was released and premiered in November 2008. The movie exposes the appalling working conditions of *bidi* workers.
- '**Giving Away So Much for So Little'**, a documentary film on tendu leaf pluckers.
- '**Promises to keep'**, a short documentary film for WHO-SEARO, which was screened in World Conference on Social Determinants of Health in Rio de Janeiro, Brazil by WHO, Geneva as a Curtain Raiser.
- '**Health in all Policies'** which was the curtain raiser at the 8th Global Conference on Health Promotion (8GCHP), Helsinki, Finland in 2013.

The VHAI has won wide appreciation in India and abroad.

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Urgently Required: A Toilet Revolution in India

Raja Panchal

Abstract

Rows of men defecating in open along the railway tracks is not a sight which is very uncommon to an average Indian. A sight which is almost an alarm to an urgent need of a revolution we need in this country to save our future generations. The revolution isn't required just to build toilets but to convince people that defecating in open is not healthy at all. It requires a change in policy which still believes in supply rather than creating demand. With 626 million still relieving themselves in open, the dream of India's new Prime Minister to have a "Swach Bharat" by 2019 seems impossible.

Acronyms/Abbreviations

CRSP: Central Rural Sanitation Programme, DRDA: District Rural Development Agency, NBA: Nirmal Bharat Abhiyan, NGP: Nirmal Gram Puruskar, r.i.c.e.: research institute for compassionate economics, S.Q.U.A.T: sanitation, quality, use, access and trends, TSC: Total Sanitation Campaign, UNICEF: United Nations Children's Fund, WASMO: Water and Sanitation Management Organization, WHO: World Health Organisation

Introduction

"Open defecation cannot end on the planet without it ending in India first,"[1] says Jan Willem Rosenboom, senior program officer on water, sanitation and hygiene strategy for The Bill & Melinda Gates Foundation. The statement makes much more sense combined with the data from WHO/UNICEF joint monitoring report 2012 on water and sanitation. According to the report India is home to 626 million people who practice open defecation, which is more than the twice of next 18 countries combined; 90 per cent of the 692 million people in South Asia who practice open defecation; and 59 per cent of the 1.1 billion people in the world who relieve themselves in open. According to the Census 2011 data, only 46.9% of the 246.6 million households have toilets while 49.8% defecate in the open. The rest 3.2% use public toilets. While on the other hand 63.2% of these homes have telephones.[2] This contrast in telephones and toilets tell the sordid tale of missing priorities in a country where lack of sanitation and hygiene costs the Indian exchequer Rs. 2.4 trillion.[3]

Figure 1 depicts the primary impacts and resulting economic impacts associated with improved sanitation option. It represents how improved sanitation brings in the

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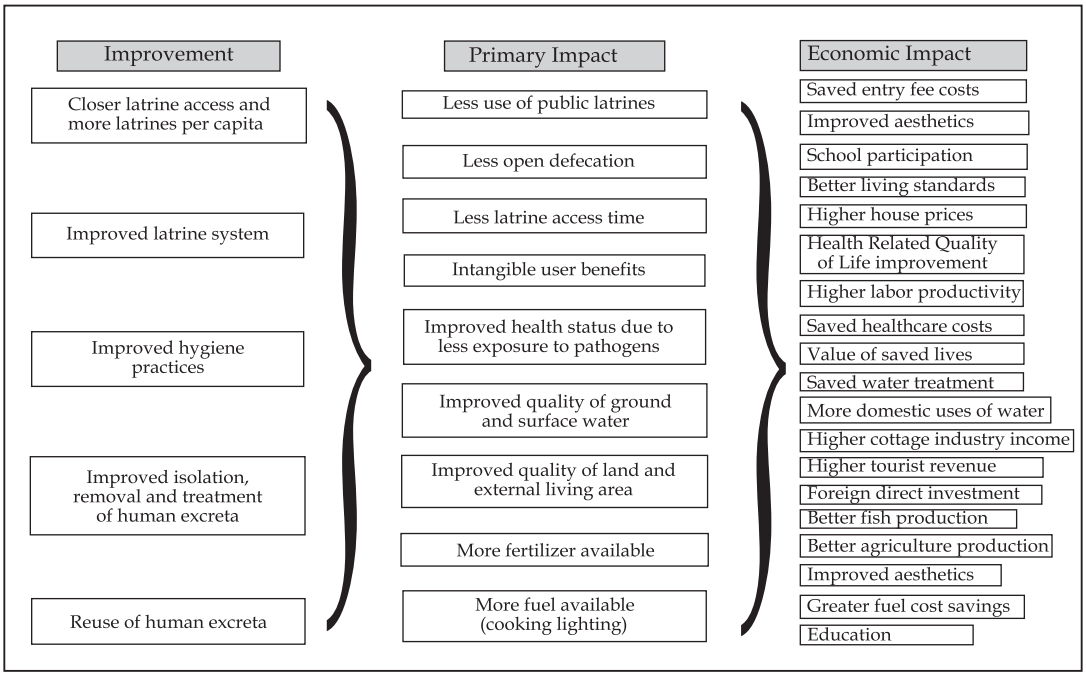
Figure 1: Impacts associated with improved Sanitation



Source: Hutton et al., 2008.
Note: "Intangible user benefits" include comfort, convenience, security, privacy. Improved aesthetics include visual effects, smell.

first-order impacts and then leads to many economic impacts that add up to give substantial gains.[4]

Our population is still oblivious to the fact that open defecation is a serious public-health problem and can expose people to diseases such as polio, giardiasis, hepatitis A and infectious diarrhoea. Dean Spears in his paper "The nutritional value of toilets: How much international variation in child height can sanitation explain?" explains why children in India are shorter, on average, than children in Africa who on average are poorer. This paradox also known as the "The Asian enigma" has received much attention from economists all over the world. He goes on to explain that despite the Asian and African counterparts being genetically different, open defecation plays a major role in stunted growth of children in India.

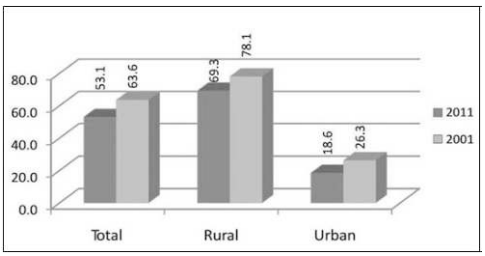
Another study published in American Journal of Tropical Medicine and Hygiene by Audrie Lin and co-authors, underscores the threats of open defecation and its relation to stunted growth in Bangladeshi children. The study suggests that children who are exposed to worse sanitary environments were more likely to develop chronic intestinal disease and are notably shorter than children in healthier environments. These along with other numerous studies highlight the health issues related to open defecation but the social issues arising out of the absence of this basic facility in India does not require much academic evidence. The recent cases of horrendous crimes committed against young girls and women when they are out to relieve themselves in the dark, combined with inter-caste violence and patriarchal attitudes, provide for a numbing example of social repercussions arising out of open defecation.

The government response

To say that while all this was happening the government was not responsive, would be too harsh. The government was very well aware of this practice and the kind of health hazard it is posing to the citizens. Total Sanitation Campaign (TSC) now known as Nirmal Bharat Abhiyan is a community-led total sanitation program initiated by Government of India in 1999 which evolved from the limited achievements of the first structured programme for rural sanitation in India, the Central Rural Sanitation Programme (CRSP), where the community participation was almost negligent. The present programme emphasises more on community participation. As a part of encouraging households to construct toilets, Government of India gives Rs. 10000 to every family. And to add vigour to its implementation, government launched an award based incentive Scheme called "Nirmal Gram Puraskar" (NGP) in October 2003 for fully sanitized and open defecation free Gram Panchayats, Blocks, Districts and States.

The government data paints a rosy picture of the success of NBA. The physical performance progress[5] against the projected objectives combining all the states is a commendable 76.91 percent. Also as shown in Fig. 2 the data collected by Census 2011 shows a marked improvement in the sanitation facilities available to the citizens when compared to the Census 2001.[6]

Figure 2: Percentage of households having no latrine India, 2001-2011



The figure shows a decrease in number of households without having any type[7] of Latrine in India. If looked through a prism of quantitative data these numbers are enough to substantiate the success stories painted out by this programme. The data published by WHO also (Table 1)[8] suggests that percentage of population having some sort of improved sanitation facility has grown in number from 1980-2012. It also shows the estimated percentage of population that would have access to sanitation facilities by the end of 2014. But as usual the reality lies somewhere in between. There is no denial to the fact that access to sanitation has certainly increased but whether the accessibility is being actually utilised to pave way for the abolition of this shameful practice is something to ponder about. There have been studies which do not directly correlate the accessibility to sanitation with the reduction of open defecation.

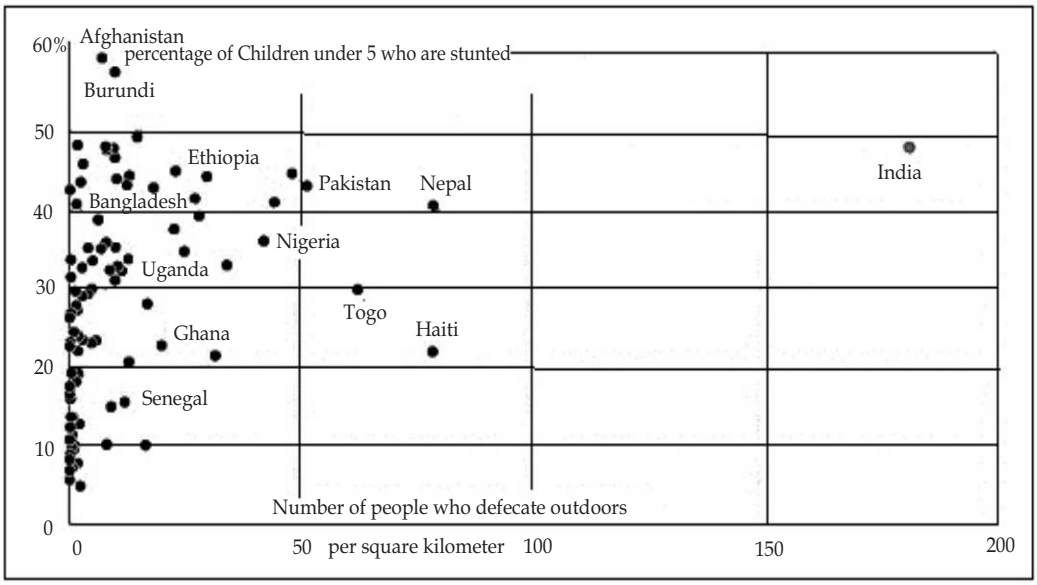
Table 1: Coverage of Indian Population by sanitation facilities

Total Sanitation				
Estimated coverage 2014 update				
Year	Improved	Shared	Other unimproved	Open defecation
1990	18%	5%	3%	74%
1995	21%	6%	4%	69%
2000	25%	7%	5%	63%
2005	30%	8%	5%	57%
2010	34%	9%	6%	51%
2012	36%	9%	7%	48%

The issue

Mahatma Gandhi, India's founding father, had, in the words of a biographer, a Tolstoyian preoccupation with sanitation and cleaning of toilets. "The cause of many of our diseases is the condition of our lavatories and our bad habit of disposing of excreta anywhere and everywhere," Gandhi wrote it in 1925. There is an instance where he inspected the toilets of wealthy homes and a Hindu temple in the city of Rajkot in Gujarat. According to him they were "dark and stinking and reeking with filth and worms" while the homes of the untouchables simply had no such facility. "Latrines are for you big people," an untouchable told Gandhi. After many years Mahatma Gandhi asked his disciples to work as scavengers in villages to encourage people to clean their own surroundings; to which his secretary and diarist Madhav Desai noted that they won't be affected by it and it would not be easy to change the attitudes of villagers. He said "It will not be surprising if within a few days they start believing that we are their scavengers."

Figure 3: Number of people defecating outdoors per square km and percentage of stunted children



Hannah Fairfield/ The New York Times, Sources: Demographic and Health Surveys, USAID (stunting data, latest year available); WHO, Unicef (defecation data, 2012)

India's enduring shame of open defecation is also rooted in cultural attitudes. Many Indians would continue to relieve themselves in the open but would keep their homes spotlessly clean.[9] Several schemes by government tried to incentivise the construction of toilets so that a larger population can have access to better sanitation facilities. One of the monetary incentives of the major scheme Nirmal Bharat Abhiyan has been discussed above. Though the scheme did help in construction of toilets but several researches show that these schemes have not been too successful in altering the behavioural aspects.

A lot of people would argue that the main cause of such widespread open defecation is the fact that India is a developing economy with a per capita income[10] of

just US$ 1499 which makes it difficult for people to afford a latrine. Surprisingly, open defecation does not have a direct relation with a country's per capita income than with the choices, priorities and habits of its people. Nepal and Bangladesh[11] which have lesser per capita income had 36% and 4% open defecation respectively in 2011. Figure 3 gives an exact idea that per capita income is not the criteria deciding the choice of people when it comes to sanitation. Also the figure gives an insight as to why Sub-Saharan countries which are poorest of the lot have less children under the age of five who are stunted than India whose per capita income is many times of these countries. An average Indian is richer than the average Bangladeshi, Nepali or Ethiopian but their sanitation choices are certainly different making them less prone to hazardous effects of improper sanitation. Certainly it isn't just a coincidence that states having poorest sanitation levels with highest population density such as Bihar, Jharkhand and Madhya Pradesh have the highest levels of child malnutrition in the country.

In order to get deeper insights of people on their toilet use r.i.c.e (research institute for compassionate economics), a non-profit research organization, dedicated to understanding the lives of poor people, especially young children, in India, and to promoting their well-being conducted a S.Q.U.A.T. (sanitation, quality, use, access and trends) survey and interviewed people in 3,235 households in Rajasthan, Madhya Pradesh, Haryana, Uttar Pradesh and Bihar about where they defecate and what they think about it. The report sheds light on why years of government focus of incentivising toilet construction has not contributed much to reduce open defecation in India. The report says:

> *"We found that people have a very expensive idea of what constitutes a latrine, and do not build the kinds of simple latrines that save lives and reduce open defecation in other countries. 40% of households that have a working latrine have at least one person who regularly defecates in the open. Less than half of people who own a government latrine use it regularly. Half of people who defecate in the open say that they do so because it is pleasurable, comfortable and convenient."*

The above excerpt from the report brings about the reasons that still hamper the dream of becoming open defecation free by 2022. The attitude that toilets are for weak, for women and for emergencies are proving to be a huge dent in fighting for defecation free India. The S.Q.U.A.T. research suggests that people having working latrines in their homes also prefer open defecation. Those who still do not have toilets prefer to spend first on mobile phones, television, cycles etc. and toilets are last on their priority.

Another Field Data Validation for Total Sanitation Campaign carried out by UNICEF in 12 districts of Gujarat, jointly by the Water and Sanitation Management Organization (WASMO) and District Rural Development Agency (DRDA) during the period 2008-2010 suggested that

> *"There were concerns that the usage of sanitation facilities was not increasing alongside the expanded coverage. Also independent assessments that have been conducted by various agencies indicated that home sanitation coverage in those districts was much less than that reported online. It was essential to undertake a systematic exercise to validate the data on access and use of sanitation facilities, and understand the reasons for the differences."*

These reports clearly suggest that the government policies focussing more on physical infrastructure has certainly not worked as a lot of respondents in the above mentioned surveys preferred to relieve themselves in open as they considered it healthier. The S.Q.U.A.T. survey conducted by r.i.c.e. suggests that there is a deep disgust for toilets in many people's hearts and, on the other hand, they see benefits of open defecation. Most people the researchers contacted during the survey, both with or without sanitation facilities cited various reasons for defecating in the open. Their arguments ranged from "one can get fresh air while defecating in open", "one remains fit, as walking to get to the place to defecate is an exercise" to "if one poops in a latrine, the bad smell enters one's body and makes them sick."

The task is more difficult keeping in view that this problem requires a behavioural change along with accessibility of sanitation infrastructure. There is an ardent need to prioritise the main causes and devise strategies that augurs the change in the perception of people still considering open defecation a healthy option.

What can be done?

World Bank economist Monica Das Gupta in a 2005 Economic and Political Weekly article had traced the neglect of public health in India to the decisions of policymakers who focussed more on disease-specific interventions (e.g. polio) than an overarching public health network focussed on prevention. Convincing Indians to use toilets is a bigger challenge than actually building them. Some families just refuse to end the norm because using a toilet is sometimes associated with filth and low social status. After centuries of practicing open defecation, a behavioural change approach is required rather than just providing the physical infrastructure.

Majority of the sanitation projects have been unsuccessful because they just focussed on providing the toilets and have a poor understanding of what actually influences the behavior change that is needed to ensure good sanitation. Researchers suggest that just the provision of subsidized latrines does not often result in improved sanitation and hygiene. And there have been many examples where investment in community mobilization and education has produced better results. This has encouraged people to demand latrines and to improve their sanitation levels.

India needs a polio like campaign where workers went door to door to convince public to accept the vaccines, likewise for a campaign to end open defecation there is requirement to build a grassroots workforce to educate people about the importance of using a toilet. Just as cricketers and celebrities got on TV, print and the radio to convince people to go out and seek *"do boond zindagi ki,"* in the same way they should be asked to encourage people to build and use toilets. National leaders played a massive role in reaching out to people in the remotest parts of the country to end polio; they must again reach the masses with the message that open defecation is not acceptable. If there can be a break with old policies of just building toilets we can look forward to have an open defecation free India. Nothing short of a media campaign on the scale of Pulse Polio to end open defecation will reach this goal.[12]

There is also a need to learn from countries like Bangladesh where many can't afford to build pucca structures with septic tanks and ceramic seats but do not prefer open defecation. So they cobble together whatever they have in order to build something which do not safely confine faeces but it points to the fact that there is an inherent demand for toilets in Bangladesh. The S.Q.U.A.T. survey shows the Indians have a very expensive[13] notion of toilets as compared to their counterparts in Bangladesh.[14] India clearly has two extremes; either the pucca structures, very expensive to construct and maintain or no structures at all. Policy-makers must learn how to convince people in rural India to use the middle alternatives which are less expensive and can save millions of lives.

Like Green Revolution saved millions from hunger, white revolution made us milk sufficient, there's an urgent need for icons like Dr. M.S. Swaminathan and Dr. Verghese Kurien who could drive another revolution that can ward off the epidemic which endangers our country in being drowned in its own excreta.

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Free Aid to Poor: Can Private Hospitals Escape Obligation?

Khushboo Sharma

Abstract

In a landmark judgment, the Supreme Court of India in 2011 directed that private hospitals built on subsidised govt. land could not "wriggle out" of their responsibility of providing free treatment to the poor as envisaged in allotment conditions. The court had upheld the Delhi High Court's order, which, in 2007, had ruled that all private hospitals which were given public land at highly subsidised costs would provide free treatment to the poor, earmarking 25 per cent of their out-patient department (OPD) capacity and 10 per cent of their in-patient department capacity for them. As per the directive of the court, the poor patients are entitled for free admission, bed, medication, treatment, surgery, nursing facility and consumables and non-consumables. The hospitals cannot charge any money from such patients and if they do, it would be considered as violation of the rule. In Rajasthan, there are a number of hospitals in the state capital of Jaipur too, built on land allotted either free or at concessional rates by the govt. The present study based on an RTI inquiry reveals the ignorance, lack of monitoring and compliance both on the part of govt. machinery as well as hospitals to facilitate free treatment to the poor.

Acronyms/Abbreviations

BPL: Below Poverty Line, CDC: Centre for Development Communication, DDA: Delhi Development Authority, IPD: Indoor Patient Department, JDA: Jaipur Development Authority, JODA: Jodhpur Development Authority, LSG: Local Self Government, OBC: Other Backward Class, OPD: Outdoor Patient Department, PIO: Public Information Officer, RHB: Rajasthan Housing Board, SC: Scheduled Caste, ST: Scheduled Tribe, UDH: Urban Development and Housing Department

Many Public Charitable Trusts and social institutions in Jaipur have been allotted land by the Rajasthan Government on concessional rates/reserved prices or even free of cost for establishment of hospitals. Such lands were made available through Urban Development, Housing and Local Self Government Department (UDH & LSG) and its agencies on the condition that these trusts and institutions would provide certain percentage of free beds to the patients of poor/indigent category in their hospitals. The conditions varied from 10% to 15 % of free beds in the Indoor Patient Department (IPD) and Outdoor Patient Department (OPD) depending on the criterion of the land allotment i.e. whether free or on reserve price or at concessional rate. It has been observed that due to lack of awareness and inadequate information, the government effort to provide free indoor and outdoor facilities including pathological, biochemical tests and treatment to the under privileged/BPL people in private hospitals has not been successful.

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As per the circulars of UDH department dated 19.04.2011 and 02.04.2012, the urban bodies along with the Medical & Health department are supposed to monitor the working of the hospitals which had got land free or at concessional rate. The medical department has to see whether the allotted land is really being utilized for the welfare of the public or not and whether the hospitals are giving priority to the treatment of BPL/SC/ST/ OBC and poor from general category or not.

But the Medical & Health department seems to be blissfully unaware of such allotment conditions and mechanism of monitoring the hospitals as specified in the above mentioned circulars. Neither the department nor the institutions who begged the land free or at throw away prices were serious about their pledge. As a result, the under-privileged people are not able to avail of the due facilities in these private hospitals.

In this context, VNS Bhatnagar, an RTI activist from Jaipur sought information from various departments i.e. Urban Development, Housing and Local Self Government Department (UDH), development agencies like Jaipur Development Authority (JDA), Jodhpur Development Authority (JODA), Rajasthan Housing Board (RHB) etc regarding allotment of land free of cost/at concessional or reserve price to private hospitals.

In Rajasthan, the maximum limit of land to be allotted at concessional rates for hospitals is:

- Small hospital : 2000-3000 sq. meter,
- Large hospital : 6000-8000 sq. meter,
- Speciality hospital : 4000-6000 sq. meter,
- Veterinary hospital : 4000-6000 sq. meter.

Land is allotted to charitable institutions to build hospitals in consultation with the medical department. The government may, however, relax norms related to land size on merit of the case.

In order to understand the complexity and magnitude of the problem, the applicant also gathered other details from the department of Medical, Health & family Welfare regarding their awareness of land allotment policy of the UDH, extent of compliance of the provisions as mentioned in circulars and their implementation in the field. He also sought details of the benefits extended by these institutions for welfare of the poor people as expected in the Land Allotment Rules. As per the rules, when the land is allotted at concessional rate at least 15% beds have to be provided free along with free medical treatment, tests etc. to these categories of people both indoor and outdoor. But when land is allotted at reserve price these hospitals are supposed to provide 10% beds free along with free medical treatment to BPL families and under privileged people as indoor and outdoor patients.

Unfortunately, the information is not centrally available in most of the government departments; therefore, they send such information-seeking applications to their field agencies. In this case also the urban and housing development departments directed their field offices to provide information directly to the applicant.

It was evident from the action of the administrative department that there was no central agency to provide information related to policy issues of the government.

After this disclosure the applicant further sought following information :

1. The purpose of keeping such land reserved for institutions in the colony/schemes.
2. A copy of terms and conditions for allotment of land on reserve price/concessional rates to institutions.
3. How many beds are kept reserved for local residents of the scheme in the hospitals which got concessional land.
4. Details of how many poor patients have been treated free of cost or at concessional rates by the hospitals which got such land allotted.
5. Whether RHB/JDA and other agencies ever monitored these aspects, if so, a request was made to provide copies of such reports.

The applicant wanted to know the State Policy and its implementation status which is a rightful expectation of any citizen. To his application various responses came. While some Public Information Officers were reluctant to disclose, some tried to respond as per their capacity. One P.I.O. even asked the applicant to send him a copy of the policy as his office did not know about it. Let us see how other PIOs responded:

A PIO from RHB, Mansarovar zone, Jaipur was kind enough to inform that the purpose of keeping such land reserved for institutions in the colony/scheme was to facilitate and fulfill the general requirements of residents. No rules were available for reservation of beds for local residents. Neither there was any record available for monitoring in his office nor any inspection was done to check whether the land is being utilised for the specific purpose of allotment or not.

Another PIO informed that as per the RTI Act, imaginary and new questions were not required to be answered. The language of most of the responses was stereotyped and evasive. The general response was that the information did not relate to their office or that no such records were maintained by them. The PIOs of medical department asked the applicant to come to the office to identify the information. The department further said that no rules were available with them for reservation of beds for local residents of the colony/scheme.

But the factual situation is different. The Urban Development, Housing and local Self Government Department had proposed committees with a member of Medical & Health department to monitor the hospitals which got land allotment free or on concessional rate. As per the circular, the committees are expected to:

— ensure whether the land allotted to these institutions/hospitals etc is being actually used for the purpose it was allotted or not;

— find out if they are providing facilities to BPL/SC/ST/OBC/disabled persons and poor persons of general category and

— check whether the hospitals are displaying terms and conditions of allotment agreement on the main gate of the institution.

The medical department was unaware of the circulars of UDH & LSG department dated 19.04.2011 & 02.04.2012 wherein the conditions have been made mandatory. It was therefore, not surprising to know that monitoring was not being done. The officials were also ignorant about displaying terms and conditions of the allotment agreement on the main gate of hospitals. This ignorance of the department and allotting authorities encouraged hospitals to misuse the provisions for their profit only.The under-privileged people are naturally bound to suffer for want of proper treatment in these hospitals. The allottees are enjoying the privileges and earning huge profits but people belonging to BPL/SC/ST/OBC/disabled and poor persons of general category are not likely to get the mandatory facilities of free medical aid.

On receiving this incomplete information, further an RTI application was filed on 07.02.2014 to seek (i) a list of private hospitals permanently displaying conditions of the allotment of land at the main gate of the hospitals (ii) details for the year 2011-12 and 2012-13 of poor patients from BPL/SC/ST/disabled/OBC/poor of general category treated indoor and outdoor (iii) details regarding non compliance of conditions of allotment by the allottees and (iv) whether the department has ever recommended withdrawal of the allotment of land to those institutions which did not comply with the conditions of allotment (v) in view of the government allotment policy dated 19.04.2011, the details of monitoring done by the department during 2011-12 and 2012-13 as to whether the land is being used for the purpose it was allotted and benefits being extended to BPL and other poor people (vi) minutes of the meetings of the state level coordination committee for monitoring these cases.

The response of the department to the application and first appeal which was also filed simultaneously was quite disappointing. It did not respond to any of the issues raised by the applicant. Rather they sent information of other welfare schemes launched by the government.

The situation is perhaps no better in other states. For example, let us take the case of Delhi. In the past DDA and other agencies had allotted land to the registered societies and trusts on concessional rates (predetermined and zonal variant rates) for establishment of hospitals and also stipulated the conditions that they would provide certain percentage of beds in the hospitals free to the poor/indigent category patients. Similarly in the OPD, it was stipulated that free treatment has to be provided to the patients belonging to the indigent category. These hospitals came into functional stages during different times and had the conditions varying from 10% of free beds in the IPD to 70% IPD beds in some of the cases. However, in most of the cases it was 25% free IPD beds. There are some hospitals where there were no conditions imposed earlier but the same were imposed later on. Due to lack of proper guidelines for providing free treatment, proper criteria of eligibility and identification of poor, and unwillingness on

the part of some private hospitals, it was not being implemented in a proper way, despite the government doing its best efforts. A high powered committee under the chairmanship of Justice AS Qureshi was also constituted in the year 2000. The committee said in its recommendations that there should be 10% free beds in the IPD and 25% of the patients in the OPD should be provided free treatment. It was also recommended that the conditions should be uniform and applicable to all the allottees with or without having conditions and the free treatment should be totally free. Delhi Govt found these recommendations reasonable and accepted the same and intimated the concerned land allotting agencies to solve the problems.

Delhi High Court in its order dated 22.03.2007 also accepted the report of Justice Qureshi recommending 10% free beds and 25% patients in outdoor to be treated free.

CDC Initiative

The department of Medical & Health has apparently neither taken up any steps to monitor such allotments to the said private hospitals in Jaipur nor the hospitals seem to be keen on fulfilling their pledge of providing certain percentage of free beds or facilities to the weaker sections of the society. The Centre for Development Communication, (CDC), a Jaipur based Not for Profit organization has therefore, decided to launch a website namely "Hospitalbeds.in" to provide information on availability of free beds for under privileged /BPL people in private hospitals of Jaipur. The website will facilitate updated information on free beds on a daily basis besides the specialty services available in hospitals. CDC supports the cause of good governance and is also involved in analyzing the status related to land allotment to various public charitable trusts and social institutions for establishment of Private Hospitals and other instituions by the government. In Delhi also a website is available on the availability of free beds for poor in hospitals.

Learning Points and Suggestions

The issues which emerged are quite eye opening. The governments, in the name of poor, allot land to hospitals but later forget to verify whether they are complying with the conditions of allotment or not. A free hand is given to these hospitals to loot the patients. They are doubly benefitted, first, they get land on cheaper prices and secondly, they are left free to earn unimaginable profits. It has become a lucrative business to earn from patients. Following steps could be taken by the governments for improving the conditions:

1. Independent monitoring body with members of civil society, may be constituted. It should monitor the conditions and compliance of allotment rules. The body may be empowered to penalise the defaulters.
2. Governments should properly coordinate the efforts of the monitoring body and ensure its compliance by the hospitals.
3. A large size sign board as envisaged in the policy should be ensured at the entrance. The board should display the provisions of free beds and free

consultations in sufficient big letters. Electronic devices can also be used to display provisions and availability of facilities in the waiting lounge.

4. Governments and NGOs can also launch websites for showing datewise status of free beds/consultation available in various hospitals for people to know.
5. Awareness campaigns through IEC activities may be organised in various localities to let people know the terms and conditions of allotment of land to various hospitals and provisions for available treatment indoor and outdoor.
6. The beneficiaries and stakeholders of these provisions should be properly defined and communicated as to reduce confusion.
7. Poor also have 'Right to Hospital' must be made very clear. It is not alms which are given at the mercy of donor.

Conclusion

It is very unfortunate that the private hospitals which build their establishments on land allotted to them at throw away prices soon forget the conditions of allotment. While they continue to earn huge profits from these hospitals, they invariably show no inclination to extend the due free treatment services to the poor or weaker sections of the society. The hospitals are negligent and govt. machinery not bothered to keep track of the violations and lapses in duty. If the hospitals are not willing to provide free services to the poor, the government machinery never bothers to take any action against them. Moreover, the response of PIOs is also very disappointing and irresponsible. They always seem to be passing the buck. The private hospitals are given land free or at concessional rate so that the poor too can avail of the best treatment facilities. But the pledge is too soon forgotten. The indifferent and ignorant attitude of government officials only adds to the woes of the poor. By doing so, they seem to be joining hands with private hospitals in the business, thus adversely affecting rights of the poor.

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Housing for All

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Abstract

Even after 67 years of independence, there is a significant deficit in availability of affordable housing in India. With around 19 million households still grappling with housing shortage, out of which 96% belonging to EWS/LIG sections, the Union Minister for Urban Development's promise to make available affordable housing for all by 2020 is a daunting task. In the past three years, little over 2.2 lakh houses were built in urban areas under different programmes. This is miniscule considering that the government needs to create 25 lakh housing units annually for the next eight years to meet the growing requirement. The present rate of completion of housing projects is only about 70,000 per year. Lack of regulatory authorities, financing, slum growth, rural-urban migration, and other related factors further augment the gap between demand and supply of affordable housing for all. To analyse the current scenario and provide solutions, a consultation was organised by the Institute of Development Management, Jaipur attended by participants from all sections of society including government authorities, academicians, members of voluntary organizations and media.

Acronyms/Abbriviations

CRISIL: Credit Rating Information Services of India Limited, EWS: Economical Weaker Section, GDP: Gross Domestic Product, GoI: Government of India, HIG: Higher Income Group, LIG: Lower Income Group, MIG: Middle Income Group

Affordable Housing for All

Housing, which ranks next only to food and clothing amongst basic human needs, has always had and continues to have important socio-economic implications. Especially in countries like India which are in transition towards development, availability of basic amenities like food, clothing, and shelter for everyone pose a great challenge. The housing sector Credit Rating Information Services of India Limited (CRISIL) has estimated that the demand-supply gap in India's housing sector will stand at 75.5 million units by the end of 2014. To deal with this issue, the Union Minister for Urban Development has promised to make available affordable housing for all by 2020, which is a formidable task facing many hurdles. Inadequate availability of affordable/low cost housing, increasing rural-urban migration, increasing land and house prices, difficulty in obtaining subsidised housing loans are a few major constraints.

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To analyse the current scenario of housing for all in India and hurdles that will be needed to overcome to achieve the vision, a consultation was organized on August 2nd, 2014 by the Institute of Development Management, Jaipur. The workshop was chaired by Lalit Kothari, IAS (Retd.) and former Chairman of Rajasthan Housing Board, and attended by participants from all sections of society including government authorities, academicians, members of voluntary organizations and media. The consultation discussed the prevailing scenario, various issues related to affordable housing, affordable housing policy with special reference to Rajasthan and suggested methods to overcome the constraints.

The programme began with drawing attention of the participants to the present prevailing scenario which is very dismal. Amid the housing shortage of up to 25 million units in the country, the Urban Development Secretary, GoI, Sudhir Krishna revealed that there are 11 million homes lying vacant as per the census figure and out of that 10 per cent are situated in the National Capital Region.* Even after housing units being available, EWS/LIG people cannot utilize them on the grounds of affordability. Huge disparity prevails between the people for whom the houses are being built and those who need them. Globally also, housing shortage is a major problem.

- By the year 2030, an additional 3 billion people, about 40 percent of the world's population, will need access to housing. This translates into a demand for 96,150 new affordable units every day and 4,000 every hour. (UN-HABITAT: 2005)
- One out of every three city dwellers – nearly a billion people – lives in a slum and that number is expected to double in the next 25 years. (Slum indicators include: lack of water, lack of sanitation, overcrowding, non-durable structures and insecure tenure.) (UN-HABITAT: 2006)

The section of society which are most affected by housing shortage are poor people, belonging to Economically Weaker Section/ Lower Income Group, their share being 96%.

	Monthly Per capita Expenditure	Estimated Number of Households (2007)*	Housing shortage in million (2007)	Percentage shortage
EWS	0-3300	21.81	21.78	99.9%
LIG	3301-7300	27.57	2.89	10.5%
MIG	7301-14500	16.92	0.04	0.2%
HIG	14,501 and above			
Total Shortage		66.30	27.41	37.3%

Source: Report of the Technical Group (11th Five Year Plan: 2007-12) on Estimation of Urban Housing Shortage

* Distribution of 66.3 million households estimated from percentage of MPCE classes in NSS 60th Round (jan-Jun 2004) NSS Report No. 505

*"11 million homes vacant against shortage upto 25 million units", The Hindu, New Delhi, April 11, 2014.

Affordable Housing: The Concept

There is no clear-cut definition of the term 'affordable housing', but the following definitions try to explain it:

Housing that is appropriate for the needs of a range of very low to moderate income households and priced so that these households are also able to meet other basic living costs such as food, clothing, transport, medical care and education.

Affordability in the context of urban housing means provision of "adequate shelter" on a sustained basis, ensuring security of tenure within the means of the common urban household.

Supreme Court and Right to Shelter

Housing for all or the lack of it has also drawn the attention of the Hon'ble Supreme Court of India. Following are some of the remarkable judgments given by the Supreme Court.

- **Francis Coralie Mullin vs Administrator UT of Delhi:**

  *"....**the right to life includes the right to live** with human dignity and all that goes along with it, namely, the bare necessaries of life such as **adequate** nutrition, clothing and **shelter**....."(AIR 1981 SC 746)*

- **Ahmedabad Municipal Corporation vs Nawab Khan Gulba Khan & Ors:**

  *"....**it is the duty of the state to construct houses at reasonable rates** and make them easily accessible to the poor. The State has the **constitutional duty to provide shelter** to make the right to life meaningful....." ((1997) 11 SCC 121)*

- **Shantistar Builders vs Narayan Khimalal Totame:**

  ***Basic needs of man** have traditionally been accepted to be three – **food, clothing and shelter.** The right to life is guaranteed in any civilized society. That would take within its sweep **a reasonable accommodation to live in. The difference between the need of an animal and a human being for shelter has to be kept in view....." (1990 SCC 520/AIR 1990 SC 630)*

- **Chameli Singh vs State of U.P.:**

  *"..... **Right to shelter** when used as an essential requisite to the right to live should **be deemed to have been guaranteed as a fundamental right.** Shelter for a human being, therefore, is not a mere protection of his life and limb ....." ((1996) 2 SCC 549)*

  (emphasis added)

Dependence on Private Sector

Though conventionally, development of EWS/LIG housing has been the responsibility of government, recently private players have been encouraged to participate more and more. Factors responsible for increasing role of private sector in affordable housing are:

- The existing shortage in demand-supply of houses has created huge demand leading to high sale velocities and lower risks.

- Economies of scale lead to better cost management in construction of houses for low-income housing.
- With decreasing land availability in city areas, developers have moved to far flung regions in search of more lucrative opportunities.
- Favourable policies, incentives from regulatory authorities and subsidised financing have also incentivized private players to increasingly take part in construction of affordable housing.

Affordable Housing Policy of Rajasthan

The Affordable Housing Policy 2009 of Rajasthan Government vows to reduce the housing shortage in the State, especially in EWS/LIG categories. To execute the action plan for construction of 1,25,000 houses in next five years, following models of Affordable Housing have been framed, incorporating various incentives for developers and subsidies for beneficiaries by Government of Rajasthan and Government of India.

Model 1:

- Rajasthan Housing Board to construct (preferably through PPP mode) at least 50% plots/ houses/ flats of EWS/LIG category in each of their housing schemes.
- Another 20% of the plots/ houses/ flats to be constructed for MIG-A category.
- Private developers to reserve 15% of the dwelling units to be used for EWS/LIG housing in each of their Township/Group Housing Schemes.

Model 2:

- Minimum 40% of the total flats constructed to be reserved for EWS/LIG flats and handed over to the nodal agency (Avas Vikas Limited) at pre-determined prices.
- The developer would be offered incentives like double of the normal FAR, TDR facility, waiver of EDC, etc.

Model 3:

- Construction of EWS/LIG flats on the land under acquisition by ULBs.
- Land to be made available to the developer on payment of compensation (Land Acquisition cost + 10% Administration charges).
- All other parameters to be followed and incentives to the developer would be as per Model No. 2.

Model 4:

- Earmarked Government land to be offered free of cost through an open bidding process.

- At least 50% houses should be of EWS category.
- The developer shall be free to use the remaining land as per his choice for residential purpose with 10% for commercial use.

Model 5:

- The model is based on various schemes approved by Government of India and also on the lines of "Mumbai Model" of slum improvement with private sector participation.

Major Constraints

Developing affordable housing for all in India faces large number of challenges including socio-economic, regulatory and cultural issues. Following are some of the major issues:

Housing as Investment: With rising land prices and the glamour of the market, the plots/ houses are bought not for living purpose but for investment. Recent trends of Reserve Bank's HPI reveal that increase in the house price index was steep in the last few years. House price on an average during the past 3 years up to 2011-12 has increased by 77 per cent, making it a very lucrative sector for investment.

Lack of Access to subsidised home loans: Benefits of subsidized home loans are being availed of by developers and upper middle class only and the real targeted group i.e. the EWS and LIG are being deprived of it because of ignorance and the complicated procedure. It can be said that the subsidy is being hijacked by a group of elite only.

Land Bank: Lack of availability of data on lands allotted and properties lying vacant, pose a severe challenge when formulating housing policies. A database detailing number of houses lying vacant and vacant plots with other information like misuse of plots/houses, encroachment on roads, etc. need to be maintained.

Migration: Migration to cities has to be controlled to contain the problem of homelessness. Many homeless people in urban areas have houses in rural areas but for the lack of employment and other facilities in villages, they have to migrate to cities.

Regulation Reforms: There is a need to relook into existing regulatory policies in the area of housing. By formulating more clear and defined guidelines within building bylaws and rules, zoning and development plans the local urban authorities in India can reduce the difficulties faced in planning for construction projects in India.

Low priority to rental housing: It is also important not to ignore the role of rental housing in affordable housing market. About 80 percent of low-income rental units in India exist in the informal market. These rented out places are often in central city area, closer to workplaces for the poor and are a classic case of poor renting to poor at affordable rents. They exist in slums, resettlement and illegal colonies. ULBs are not paying attention to this area.

Private sector: Though increasing role of private sector has reduced the burden placed on government for making housing available for all, regulations and incentives are needed to ensure that the housings made available fulfill the criteria they are being

constructed for. Schemes for redevelopment and slum rehabilitation should also be formulated to maintain development density.

The following points emerged from the expert presentations and discussions:

1. Housing should not be seen as an investment, rather **'One Family, One House'** policy should be adopted. Number of houses that can be owned by a family should be restricted.
2. The **idle wealth should be channelized to productive sectors** rather than being invested in housing and land. If surplus money gets good returns from the real estate who will invest it on other productive areas. This is one of the reasons that country is not getting the dividend on the wealth lying idle with the people and the prices of land and houses increase day by day.
3. **Vacant plots/houses should be taken back** by ULBs and Development Agencies. This will bring down the prices of housing/plots. The allotment condition of dwelling should be adhered to. If in some urban development bodies the condition of compulsory residing is not there it should be incorporated and strictly imposed.
4. **Income from regularisation** of unauthorised commercial areas **should be invested by the Rajasthan Housing Board in construction of EWS/LIG** housing so as to increase availability of affordable housing.
5. **Prices of houses/plots should be lowered down** i.e. they should be made affordable. If the role of black money is reduced from this sector, prices may come down.
6. **Subsidized home loans** for EWS/LIG families should be properly monitored and made available to real needy.
7. **To check migration, faster transport facilities** and **other social amenities** should **be developed in rural areas. Satellite towns need to be developed**. Provide facilities like education, health and sanitation in the rural areas to discourage rural-urban migration. Also satellite towns with rapid transportation and commutation facilities would be helpful in this regard.
8. Rather than relocating slum dwellers, the **existing slum areas should be developed** by providing facilities like proper sanitation, clean drinking water, health care and education, etc. Isolating slums and imposing permanent quarantine on them by erecting high walls around, may not be appropriate for the mainstream society. Poor too have **right to city.**
9. **Land Bank should be maintained,** which is nothing but an inventory of occupied and vacant houses, plots and other related information. This will help in monitoring the available land/houses and their proper utilization, collection of fines, taxes etc. Today 'land' has become more precious than 'money'; a proper land banking system should be developed.

10. **A separate regulatory authority** for proper urban development that may also work for providing and regulating housing needs of the people and houses/plots allotted to various categories **should be formed**. It can also verify, audit and monitor the land bank accounts and the report could be put in the State Legislatures. Proper distribution of home loans could also be monitored by the Authority.

11. **As an interim arrangement, proper *'rain baseras'* (night shelters) or dormitories can also be built** with appropriate sanitation and drinking water facilities so that people coming to cities in search of job can have temporarily affordable and hygienic accommodations. Rental houses can also be constructed for new settlers.

12. **Either the property market** should **be based totally on market mechanism** i.e. supply and demand to be left to market **or be fully regulated.** It was observed that in Ahmedabad and Indore flats are comparatively cheaper because there the market mechanism operates fully.

Conclusion

The need of affordable housing is now being greatly felt in urban areas. Lack of low income housing for poor people has led to large scale development of slums and congestion. These slums suffer from lack of basic amenities like safe drinking water and sanitation, further deteriorating the living conditions. Large scale development within city limits is increasingly difficult due to lack of land, financing, rising prices and obsolete regulations. Also investment in housing and land should be discouraged and alternate channels with higher rate of returns should be promoted. Investment of idle wealth in housing sector does not produce any productive returns for the country's GDP in the long run. These issues need to be dealt with urgently or further delay will only worsen the situation.

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