Situational Analysis of Health Scenario in Rural Karnataka, South India

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ABSTRACT

Rural health development in India traces its history to the seventeenth century when voluntary efforts to serve mankind were initiated by the then rulers. The rural health development functions were assumed by the government in the context of recurrent famines, but in the beginning, they did not have any legal sanctions behind them. We can divide health in India into two divisions: 1) high quality medical care in urban India; and 2) low health infrastructure in rural India. Reports indicate that more than 63 percent of rural people do not have access to modern curative and preventive health care facilities in various part of the country and that only 24.6 percent of doctors are serving in rural areas. Furthermore, there is a large disparity in the presence of government hospitals between rural and urban parts of Karnataka state. Illiteracy, unhygienic health conditions, malnutrition, and a scarcity of potable water from wells are some of the reasons why rural people make up such a large proportion of those suffering from various health disorders. Normally, people with low economic status such as rural folk are the victims of various epidemics and endemics. The major section of rural society is either small land holders or marginal holders having very limited resources. Clearly, their socio-economic status is very low and they cannot spend more money on health. It is stated that there is a positive correlation between the health status of the rural people and their social, economic, and cultural background. This paper is based on a careful review of various reports, secondary data, and experts' opinion pertaining to the health situation in Karnataka state, South India.

Keywords: health, rural, diseases, health infrastructure, health culture

บทคัดย่อ

การส่งเสริมสุขภาวะในชนบทของประเทศอินเดียมีความเป็นมายาวนาน ย้อนไปตั้งแต่ช่วงศตวรรษที่ 17 ซึ่งผู้ปกครองบ้านเมืองขณะนั้นริเริ่มงานอาสาสมัครเพื่อรับใช้มนุษยชาติ โดยในระยะแรกมุ่งรับมือกับปัญหาความอดอยากของผู้คน ยังไม่มีมาตรการทางกฎหมายใดๆมารองรับ ในปัจจุบันบริการด้านสุขภาพจำแนกคร่าวๆเป็น 2 ประเภท คือ บริการระดับคุณภาพในเขตเมือง และบริการระดับต่ำในเขตชนบท มีรายงานว่ามากกว่าร้อยละ 63 ของคนชนบทในภูมิภาคต่างๆของอินเดียยังไม่สามารถเข้าถึงบริการทางการแพทย์สมัยใหม่ทั้งในด้านการป้องกันและการรักษา อีกทั้งมีแพทย์เพียงร้อยละ 24.6 ของอินเดียที่ทำงานในชนบท เฉพาะในรัฐ Karnataka นั้นพบว่ามีความเหลื่อมล้ำสูงของสภาพโรงพยาบาลรัฐในระหว่างเขตเมืองกับเขตชนบท ทั้งนี้ ปัญหาพื้นฐานต่างๆ ได้แก่ การไม่รู้หนังสือ ความเป็นอยู่ที่

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ไม่ถูกสุขอนามัย ทุโภชนาการ และการขาดแคลนน้ำดื่มสะอาดจากบ่อบาดาล เหล่านี้ เป็นปัจจัยที่ส่งผลให้ชาวชนบทมีปัญหาด้านสุขภาพเป็นสัดส่วนที่สูงของประเทศ โดยทั่วไป กลุ่มคนที่มีสถานะทางเศรษฐกิจต่ำดังเช่นคนชนบทมักจะเป็นกลุ่มเสี่ยงต่อโรคทั้งโรคติดต่อและโรคไม่ติดต่อ คนส่วนใหญ่ในชนบทมีที่ทำกินและทรัพยากรจำกัด จึงมีฐานะทางเศรษฐกิจต่ำ ไม่สามารถรับภาระค่าใช้จ่ายด้านสุขภาพได้ สามารถกล่าวได้ว่า มีความสัมพันธ์เชิงบวกระหว่างภาวะสุขภาพของคนชนบทและสถานะทางเศรษฐกิจ-สังคมและวัฒนธรรม สาระที่นำเสนอในบทความนี้ประมวลจากเอกสารรายงาน ข้อมูลทุติยภูมิ และความคิดเห็นของผู้เชี่ยวชาญที่เกี่ยวข้องกับสุขภาวะของประชาชนในรัฐ Karnataka เขตอินเดียตอนใต้

คำสำคัญ: สุขภาวะ ชนบท โรค ปัจจัยมูลฐานด้านสุขภาวะ สุขภาวะวัฒนธรรม

INTRODUCTION

In all human society, irrespective of its simplicity and complexity and no matter how small or big, no matter how advanced or traditional, there exist simple or complex health issues. Strasser (2010) wrote, "In all developing countries, accessibility to rural and remote communities is exaggerated by the physical topography, with mountains, deserts and jungles creating difficulties for transportation, at times complicated by varying climatic conditions. As a result, in some areas, at least some of the time, there is no means of transportation, and evacuation of critically ill or injured patients is impossible. The standard and quality of communications between diverse rural and remote areas and between those communities and the urban centers is also very variable."

Health is not only a stable state of physical and natural well being but also in a true sense it involves various other complex issues. It is a widely known fact that health is one of the imperative indicators shimmering the excellence of human life since time immemorial. A healthy community is vital because it can set the destiny of the any society or country. Healthy human resources allow any type of development or any kind of achievement. Health is a vital, integrated component of an individual or a community. Sometime the collapse of one's health may even lead toward an early death. Furthermore, an unhealthy community may be hinder the holistic growth and development of any society. Poor health status of any community may isolate that community from the mainstream of the society. There are some external determinants which can decide the health status of the rural people including socio-economic, environmental, and the availability of hospitals, doctors, and health infrastructure. It significantly depends on some internal factors including one's health culture, education, health practices, *et cetera*.

Basically, India is a land of villages. Since independence, the government of India has implemented several programs to improve the health conditions of rural people. However, growing regional and gender disparities have become a big challenge for the rural health sector. Today, Indian rural people are frequently facing both communicable and non-communicable health disorders. A scientifically based primary health care center is still a distant dream, even though HIV/AIDS is also gradually spreading among rural folk. Life expectancy among rural folk is also gradually decreasing. The infant mortality rate is 85 per 1,000 live births and the maternal mortality rate is around 445 per 100,000 live births. Reports indicate that more than 73 percent of the rural people in south Karnataka do not have access to modern, curative, and preventive health care facilities (Health and Family Welfares Survey Report, 2000). It was found that only 24.6 percent of doctors are serving in rural areas and a large disparity in the presence of government hospitals between rural and urban parts of the country can be seen. For the period 1905 to 2000, the life expectancy at birth was 60.36 years for males and 63.39 for females in rural parts. In

1991, the sex ratio was 920 females for 1,000 males in rural parts of Karnataka. After introducing the National Rural Health Mission Programme, maternal and child health programs have been improved significantly in rural areas and an immunization program in rural areas has progressed. Some of the programs, like the upgrading of primary health centers and sub centers, are underway. Today, almost all public health centers are working all day every day. Strong measures have been taken to control endemic diseases. Regular, free health checkups are undertaken.

However a reasonable disparity in rural health can be seen today in most rural parts because of: 1) a lack of cultural-specific rural health policies; low expenditure on the health sector in the budget; 3) the absence of rural infrastructure; and 4) a low participation rate by rural people in developmental issues (Health and Family Welfare Survey Report, 2008).

Experts have observed that poor living standards and unhygienic conditions are the factors responsible for the frequent outbreaks of various communicable diseases in rural areas. Nowadays, due to the usage of more pesticides and chemical fertilizers, there are increased health hazards for rural people. Mother and child healthcare practices in rural areas are pathetic. However, in certain cases, the young, educated, rural generation is showing more interest toward modern healthcare. Discrimination against women in health care normally exists in rural areas and it is often studied only as a part of the overall pattern of discrimination against women. As far as women's health is concerned, these experts have opined 'what has been observed is that most of the parameters are often defined in such a manner that discrimination is not even apparent'. Studies have revealed that in rural areas, women run the household, doing cooking, collection of water, fuel, fodder, agricultural work, and looking after the children among other tasks. Such activities invariably affects the health of women, especial in rural parts (Sinha, 2000).

Furthermore, Kshathriya (2004) has written, "It may be worthwhile to state that at least one component of health is universally seen among the rural societies, and that is, committing or omitting certain acts, in other words a breach of trust is thought to bring upon some kind of affliction on the individual or a family as a whole. Measles, tuberculosis, diarrhea, cholera are some such diseases where individual's action may cause some concern to the family, clan or the village".

In rural areas, people normally think that being unable to work is the general index of illness. Even though the basic concept of illness changes from caste to caste in rural areas, a person will be declared as diseased if he/she cannot perform day-to-day work. It is expected that a healthy person should work normally without having any problems. Hence sociologists have concluded that in rural areas, illness is more related to functional rather than clinical or biological factors. Hence, sometimes people having a mild fever, headache, cough, wounds, or giddiness will not be considered as ill because their symptoms will not hamper their normal routine work. Usually people don't bother with such symptoms.

In the majority of cases, people normally do not consider that health status depends on sanitation. Rather, rural people connect their illness problems to fate and thereby to supernatural powers. People believe there are some benevolent and malevolent supernatural powers. Benevolent supernaturals do good things to human beings while the latter harm mankind. People believe continuous worshiping of benevolent powers brings good deeds to the family. Beard, Tomaska, Earnest, Summerhayes, and Morgan (2009) have opined that 'socioeconomic and cultural factors have long been thought to influence an individual's health and they suggested a framework for characterizing these factors that comprises individual-level (individual socioeconomic status, sex, race) and neighborhood-level dimensions (population composition, social environment, physical environment) operating both independently

and through interaction'. Recent spatial research suggests that in rural communities, socioeconomic disadvantage and indigenous status are two of the greatest underlying influences on health status. However, rural communities also face additional challenges associated with access to and utilization of health care (Beard et al., 2009).

Health issues in rural people are many and diverse; they vary from fever to acute respiratory tract infection and sometimes cholera and cancer. *Post partum* illness also causes maternal mortality in rural India. Rural people in Karnataka have traditional belief toward health and illness. Some rural people are still practicing traditional healing approaches with other types of established medical systems because of their unique social, economic, and cultural background is also responsible for the onset of various communicable and non-communicable diseases. Various infectious diseases are reported to cause morbidity in rural areas. In addition, 0.30 million deaths occur in rural areas because of water-borne diseases in rural Karnataka and typhoid, cholera, and warm infections are common in rural areas causing 0.60 million deaths. About 1,000 malarial deaths occur annually in rural India. Only 26 percent of rural pregnant women had an antenatal checkup. Furthermore, health issues were related to snakebites, dog bites, and mishandling pesticides among others. Rural folk face oral problems, respiratory infections, addictions, and gynecological problems, with some of these being highly seasonal (Advani & Akram, 2007).

Strasser (2010) has opined that 'with the concentration of poverty, low health status and high burden of disease in rural areas, there is a need to focus specifically on improving the health of people in rural and remote areas, particularly if the urban drift is to be reversed. The WHO International Development Programme has highlighted this, with specific objectives for policies and action which promote sustainable livelihoods including access for people to land, resources, and markets, as well as better education, health, and opportunities for rural people'. These objectives seek to contribute to lowering child and maternal mortality, and to improving basic health care for all, including reproductive services. Achievement of this is linked to the protection and better management of the natural and physical environment.

Objective

The major aim of this study was to review the current health issues and health infrastructure in rural parts of south Karnataka State, India.

METHODOLOGY

This study has been carried out in two stages, using two different methodological approaches.

Documentary analysis

In the first phase, a review of relevant policy documents reflecting India's health policy from the past 15 years has been carried out utilizing a literature review, analysis of policy documents, and some secondary data analysis. The search strategy involved contacting general libraries and university libraries, leading non-governmental organizations, and government offices. In addition, a search was conducted of electronic databases for relevant studies conducted from 1990 to 2012. Relevant data have been extracted from each paper and synthesized through a narrative review that includes descriptive characteristics as well as more substantive issues such as the budget for the health sector, the outbreak of various diseases, the impact and failure of certain health policies, and gaps in the research.

Interview/Consultation

In the second stage, key informant interviews were conducted with rural stakeholders and individuals knowledgeable about public health policies. Such interviews were very useful for obtaining detailed background information on risk

factors, public debate, and variation in health infrastructure in rural areas. The interviews were semi-structured.

Interviews or consultation involved three groups of stakeholders: 1) experts from the leading health research institutes, health policy makers, and other developmental agencies; 2) senior academic experts in the health field; and 3) directors and executives from local and national statutory and volunteer bodies.

About Karnataka State

Karnataka state is situated in South India and is the eighth largest state of the country covering 74,122 square miles. The capital city of the state is Bangalore which is an information technology hub of the world and is also known as Silicon Valley. Karnataka is bordered by the Arabian Sea to the West. With 61,130,704 inhabitants, more than half of the population is rural (Health and Family Welfare Survey Report, 2000).

FINDINGS

In general, rural areas are marked by poor implementation of health facilities or health infrastructure. Various governments have implemented many rural specific health programs. A high concentration of infectious diseases, the absence of effective health education, a lack of fundamental facilities, and problems in implementation are adversely affecting rural health. Even today, there are no good road facilities to many remote villages across the country and thus, new medical technologies have not yet reached the many villages in the country.

The plight of rural people has drawn increasing policy attention since 1960. Even so, today, the majority of rural people are suffering with various communicable and non-communicable diseases (Tables 1 and 2). It is stated there is a positive correlation between the health status of the rural people and their social, economic, and cultural background. In India, where rural people have been significantly altered socially and culturally by the British colonization, it is crucial to understand the social and cultural consequences of colonization and how these have altered the health culture and health behavior of rural dwellers historically and currently.

According to the various studies, there are numerous public health issues with respect to the rural Karnataka, including: malnutrition, various communicable diseases, failure of family planning, a high infant mortality rate, issues of sanitation and hygiene, a shortage of safe drinking water, cultural health beliefs, and poor health infrastructure (Kshathriya, 2004).

Table 1 Infectious diseases in rural areas in Karnataka (Annual base)

Indicator	Percentage
Typhoid	14.67
Jaundice	12.70
Cholera	15.80
Diarrhea	17.80
Malaria	23.00
Viral fever	19.20
Dengue	7.10
Plague	3.10
Other	26.80

Source: Rural Health Statistics Bulletin (2011)

Malnutrition

The World Health Organization (1985) found that 57 percent of the deaths of under-five-year-old children in developing countries were accompanied by malnutrition and a low weight for their age. Furthermore, 47 percent of rural children today are facing severe malnutrition problems and this figure is even greater than in many African countries. Due to malnutrition, social and cognitive development is impeded. Malnutrition and childhood mortality have become a serious problem among rural children and their social-cultural background, health, behavior, and health culture dynamics play significant roles as vital determinants of the health status of a particular community. Hence, malnutrition and childhood mortality are more common in rural areas as good health requires a balanced diet (Verbrugge, 1985) The under-five-year-olds need a good nutritional diet which is rare in many rural settings in the country and this causes mortality and morbidity in rural areas.

Nearly 3 million rural children in India die before the age of five due to various health issues. The infant mortality rate and the under-five mortality rate are good indicators of health and the quality of life of any given community. Reports shows that various child health indicators of the country have improved considerably and infant mortality has declined from 78 to 57 deaths per 1,000 live births and under-five mortality from 109 to 74 deaths per 1,000 live births. However, the under-five mortality level among rural children is still shockingly high (at 97 deaths per 1,000 live births). Rural people constitute 60 to 62 percent of the total population, but account for about 19 percent of all under-five deaths, and 23 percent of deaths are in the one- to five-year age group (Health Family Welfare Survey Report, 2006).

Reports have shown that poverty, illiteracy, malnutrition, scarcity of potable water, sanitary conditions, poor mother-child health services, and problems in providing national health and nutritional services, among others are the most important causative factors for the prevalence of severe childhood mortality and morbidity amongst rural communities in India. Despite marvelous development focusing on preventive and curative medicine, the child healthcare delivery services in several rural communities are still poor and unscientific and need to be further strengthened to achieve the goal of health for all in the country (Health Family Welfare Survey Report, 2006).

Various communicable diseases

Rural people are more prone to have many communicable diseases such as malaria, jaundice, tuberculosis, cholera. In many parts of rural India, diarrhea is the prime cause of early childhood mortality. It has been reported that more than 7,000

Table 2 Other types of health problems in rural areas in Karnataka (Annual base)

Disease	Percentage
Injuries	34.5
Heart and kidney problem	13.6
Cancers	7.9
Abortions	11.8
Mental problems	9.5
Snake and other bites	21.6
Chemical manures	16.8
Skin related	11.8
Bone and liver related	17.8

Source: Rural Health Statistics Bulletin (2011)

rural people die annually because of various communicable diseases. Malaria and jaundice has become common in rural areas because of poor sanitation (Health Family Welfare Survey Report, 2006).

Failure of family planning

Due to the various social and cultural beliefs, family planning programs have failed in many rural areas of the country. Poor contraceptive materials also become a problem in rural areas. Rural people are still using traditional types of family planning which have mixed results.

High infant mortality rate

It was found that 0.7 million rural children die each year before reaching their first birthday. Under-five mortality and infant mortality are also big issues in rural health care. Due to cultural beliefs, rural people are not showing much interest in immunization and prevention care. Diarrhea and respiratory infections are also responsible for high infant mortality in many remote parts of the country (Health Family Welfare Survey Report, 2006).

Issues of sanitation and hygiene

Even today, considerable numbers of rural households have no toilet facilities. Only about 21 percent of Indian rural families use a closed toilet whereas nearly 80 percent of the population are still using open spaces. Open air defecation also spreads infections which is also a major issue in rural parts (Health Family Welfare Survey Report, 2006).

Shortage of safe drinking water

This has caused a severe problem in rural areas as some time people have to walk long distances together to get safe, potable water and the use of contaminated water also causes various infectious diseases in rural areas. The ground water level is also decreasing due to the repeated failures in the monsoon rain. The presence of arsenic and fluoride in the ground water also pose a threat to rural health.

Cultural health beliefs

It was found that the social-cultural background, health behavior, and health cultural dynamics plays a significant role as vital determinants of the health status of particular rural communities. Malnutrition and childhood mortality have became a serious problem among rural children in India and they are more common in rural areas. More than 57 percent of deaths of under-five children in developing countries are accompanied by under-nutrition, low weight for their age and this is largely due to the various cultural health beliefs with respect to diet. Anthropologists have revealed that the development of health culture in the rural environment should be examined as a sub cultural complex of the entire way of life. There are a number of forces percolating from the larger socio-economic environment and directed through the attributes of historical, social, and political dimensions to the development of the pattern of their health culture in given rural settings (Banerji, 1986).

Poor health infrastructure

Modern healthcare facilities and hospitals are being concentrated only in urban areas (Table 3). Even today, most villages don't have enough primary health centers as sub centers. The majority of rural hospitals are lacking doctors and other paramedical staff. Some of hospitals in rural areas don't have enough health infrastructure.

TRENDS IN HEALTH STATUS IN RURAL INDIA

In 2000, the life expectancy at birth was around 62.36 years for males and 64.39 for female. In 1991, the sex ratio was 920 females for 1,000 males in rural areas. Action has been taken to increases the life expectancy and sex ratio by

applying a war footing to rural health infrastructure. Maternal and child health programs have been improved in rural areas. Immunization programs in rural areas have also increased. Some of the programs involve upgrading primary health centre and sub centers. Today, almost all rural public health centers (PHC) are on an all-day, every-day schedule; however, the majority have insufficient infrastructure. Strong measures have been taken to control endemic diseases through PHC; however, such diseases have not been eradicated. Regular, free health checkups are being undertaken through NGOs with some success (Advani & Akram 2007).

Mortality

It was reported that the infant mortality rate was 65 in every 1,000 live births in 1994 and in 1998, and the material mortality ratio during 1998 was estimated at 415 per 100,000 live births. Furthermore, around 0.54 million children under five years were dying from diarrhea in 2010 with around 0.32 million dying from acute lung problems and the same number from cholera. In addition, around 0.2 million children are affected every year by malaria in rural areas, while 0.5 million people die from heart-related diseases, 11,675 in traffic accidents and 1,143 from occupation-related accidents (Advani, & Akram 2007).

The crude death rate has been slowly decreasing. In 1998, infant mortality was 112 per 1,000 live births and now it has declined to 32 per 1,000 live births. It was reported that the following diseases are the most common causes of death in rural areas (in descending order as at 2009): cholera (63%),jaundice (57%), malaria (41%), typhoid (62%), and dengue fever (22%) (Rural Health Statistics in India, 2010). Deaths due to non-communicable diseases (in descending order as at 2009) were: heart problems (blockage of veins), acute lung problems (due to smoking), liver damage (due to alcohol), kidney problems (due to modern life style), and oral cancer (due to using Jarada and Beeda) according to Rural Health Statistics in India (2010). Other causes of death in rural areas include: severe injury (32%), poisoning by snake bite (31%), and parasitic diseases due to using pesticides (13%) according to Rural Health Statistics in India (2011).

Morbidity

Mortality and morbidity are good indicators of the health status of any community. Morbidity focuses on the death of people due to various problems after certain years. In 1999, around 0.6 million leprosy cases, around 0.2 million tuberculosis (TB) cases and around 0.27 million malaria cases were reported which indicate that as a

Table 3 Comparison of health care services in rural and urban areas

Indicators	Total	Urban	Rural
Infant mortality rate	42.00	36.00	48.00
Birth rate	22.80	18.50	24.40
Death rate	7.40	5.90	8.00
Total fertility rate	2.70	2.10	3.00
Pure drinking water	89.00	96.00	86.00
Sanitation	28.00	18.00	52.00
Under weight children	40.40	30.10	43.70
Adult education	66.00	80.30	59.40
Immunization	43.50	52.60	38.60
AWL treatment	50.70	73.80	42.80
Health care service	40.80	69.40	51.10

Sources: Health and Family Welfare Survey Report (2009)

result of an intensive vaccination program, the death rate in under-five children is declining in rural parts of Karnataka. However, even today, there are 0.3 million deaths in rural areas every year due to tuberculosis even after implementing the DOTS scheme (a special program to curb TB) to eradicate the problem. However the rate has dropped to 0.2 million and the problem is declining. The prevalence rate of leprosy is also decreasing due to the limited success of multi drug therapy. After introducing some awareness programs in rural areas of the state, the number of people dying from various life threatening diseases has decreased gradually. (Karnataka Glance Report, 2012).

Disability

Reported disability statistics for every 1,000,000 people in rural areas of Karnataka state in 2004 include: physical disability (7,571), visual disability (2,110), hearing disability (900), speech disability (650), and locomotive diseases (1,041). In addition, 3.3 million were blind due to cataracts and eye-related issues (Karnataka Glance Report, 2012).

HEALTH INFRASTRUCTURE IN RURAL KARNATAKA

Rural health infrastructure has been neglected for a long time as governments have given low priorities to rural health issues (Table 4). Even after introducing the NRHM program, the situation has not improved completely (Tables 5 and 6). Reducing funds for rural health issues in India is also a big issue in recent times. Many rural areas are facing a shortage of qualified doctors and other paramedical staff. In some rural areas, untrained doctors and under-trained doctors are practicing which is a great threat to the rural community. Various studies have found that lifestyle-related diseases and illnesses are more common in rural areas where the low economic status also creates more stress on these communities (Sinha, 2000). The absence of mental health care facilities has also increased the severity of the rural problem. Moreover, smoking, alcohol, shortages of medicines, and low nutrition foods have also contributed to the poor health status in rural India. The World Health Organization has also advised developing countries to decentralize health issues and strengthen the health surveillance system, especially in rural areas. Emerging technologies can be used to serve the needs of rural people. There is a need for an area-specific, innovative health education program as a part of preventive measures. There is a requirement in new program guidelines to create awareness even at the school level on health issues, health NGOs, and health workers to co-ordinate

Table 4 Infrastructure facilities

Sl no	Facility	Number per 1,000,000 population
1	Public health centers	38
2	Sub centers	140
3	Community health centers	6
4	Rural hospitals	8
5	Urban hospitals	8
6	Total hospitals	16
7	Total beds	1096
8	No. of doctors at public health centers	48
9	No. of health assistants at public health centers	34
10	No. of health workers at public health centers	203

Source: India Human Development Report (2011)

Table 5 Selected health indicators in Karnataka and India

Sl. No.	Items	Karnataka	India
1	Life expectancy at birth	65.30	63.50
2	Infant mortality rate	41.00	50.00
3	Under-five mortality rate	54.70	74.30
4	Percentage of persons not expected to survive beyond the age of 40 years	14.60	17.70
5	Percentage of women adult population with BMI < 18.5	35.50	33.00
6	Percentage of men adult population with (Body Mass Index) BMI < 18.5	33.90	34.20
7	Percentage of women with anemia	51.50	55.30
8	Percentage of children (0-5 years) with anemia	70.40	69.50
9	Death rate	7.20	7.30
10	Public expenditure on health as a percentage to Gross Domestic Product	0.87	2.02
11	Per capita public expenditure on health	233.00	1014.00
12	Per capita private expenditure on health	597.00	1639.00
13	Public expenditure on health as a percentage to total health expenditure	71.90	58.30
14	Private expenditure on health as a percentage to total health expenditure	28.10	41.70

Source: Health and Family Welfare Survey (Round 3) Report (2011)

Table 6 Division-wise selected health infrastructure facilities in Karnataka, 2010

Facility		Belgaum	Gulbarga	Bangalore	Mysore	North	South	Karnataka
Per 100,000 population	District and other hospitals	0.9 (4)	1 (3)	1.2 (2)	1.4 (1)	1	1.3	1.1
	Community health centers	5.5 (3)	6.5 (2)	3.4 (4)	7.4 (1)	5.9	4.8	5.3
	PHCs and Sub centers	154 (2)	142 (3)	135 (4)	271 (1)	149	184	169
	Total beds	764 (3)	789 (2)	737 (4)	1196 (1)	775	901	847
Per 10,000 square km area	District and other hospitals	2.6 (3)	2.5 (4)	5.4 (1)	3.9 (2)	2.5	4.7	3.6
	Community health centers	14.9 (4)	16.6 (2)	15.5 (3)	21.4 (1)	15.6	18.2	16.9
	PHCs and Sub centers	418 (3)	365 (4)	614 (2)	783 (1)	394	693	539
	Total beds	2070 (3)	2019 (4)	3337 (2)	3455 (1)	2047	3392	2701

Note: Figures in the parentheses are rankings

Source: Karnataka Glance Report (2012)

activities. There is general awareness that the rural population has inadequate access to health care, and the poor placement of medial and paramedical staff in rural districts is also under question while maternal and child mortality rates in Karnataka are also under scrutiny. All these factors play a role in the diminishing rural health care service in many rural parts of Karnataka. It was found that at least six to seven births take place every day without the supervision of any doctor at many general hospitals in the state. Sometimes one sub center must cater for around three to five villages at a time. Proper documentation on patients is also a large problem due to inadequate human resources (Health and Family Welfare Survey, 2011).

When the health culture is strongly influenced by the external organics (level of education, migration, media *et cetera*) in a particular geographical area, rural people will develop new health behavior. This adoption will lead to new health seeking behavior to resolve the health problems within the given ecological settings (Parson, 1963). This type of forced change in the health behavior of a particular community sometimes will be explicit and sometimes will be implicit. Government and NGOs needs to look into the cultural fabric of rural health for speedy social inclusion before framing any new public health policies (Wilkinson, 1996).

CONCLUSION

Anthropologists have revealed that the development of the health culture of the rural environment should be examined as a sub cultural complex of the entire way of life. There are a number of forces percolating from the larger socio-economic environment and directed through the attributes of historical, social, and political dimensions to the development of the pattern of the health culture in the given rural settings. The general health status of rural people is worse than in urban areas. The infant mortality rate in rural areas is 1.5 times that of urban areas. Poverty, low health status, and the high burden of diseases are rampant in rural areas. The World Health Organization in its program has specifically advised developing countries to focus more on sustainable development including the regeneration of agricultural activities, natural resources, and quality health care. Achievements in these issues might lead toward better management of the natural and physical environment. Good health is a way out of poverty. Good health status may contribute to producing economic assets. Poor health may also decrease the productive capacity of rural people. The rates of avoidable deaths in rural areas are higher than in cities. It was found that work injuries are higher in rural areas and people will normally ignore the consequence of these injuries which may some time lead to losing an organ or body part. Unlike in urban areas, rural communities have different cultures and a particular sense of behavioral norms. Social roles and functions among rural people are supported by historical religious practices. Good rural medical healthcare has become a nightmare. In many parts of the country, the poor transport system and the underdeveloped medical infrastructure also cause delays in shifting patients to good hospitals. Sometime it is impossible to evacuate patients because of remoteness and the bad communication system.

REFERENCES

Advani, M., & Akram, M. 2007. Health concerns in India. In M. Akram (Ed.), *Health Dynamics and Marginalized Communities*. (pp. 34–39). Jaipur, India: Rawat Publications.

Banerji, D. 1986. Social sciences and health service development in India. *Sociology Alternative, 7*(2), 11–15.

Beard, J. R., Tomaska, N., Earnest, A., Summerhayes, R., & Morgan, G. 2009. Influence of

socioeconomic and cultural factors on rural health. *Australian Journal of Rural Health, 17*(1), 10–15.

Health and Family Welfare Survey Report. 2000. New Delhi, India: Government of India.

Health and Family Welfare Survey Report. 2006. New Delhi, India: Government of India.

Health and family Welfare Survey Report. 2008. New Delhi, India: Government of India.

Health and Family Welfare Survey Report. 2009. New Delhi, India: Government of India.

Health and Family Welfare Survey (Round 3). 2011. New Delhi, India: Government of India.

India Human Development Report. 2011. New Delhi, India: Government of India.

Karnataka Glance Report. 2012. Bangalore, India: Government of India.

Kshathriya, M., (2004). Health care infrastructure in rural India. *Journal of Social and Economic Research, 7*(2), 45–48.

Parson, T., (1963). *The motivation of economic activities in essays in sociological theory,* Glencoe, UK: The Free Press.

Rural Health Statistics Bulletin. 2010. New Delhi, India: Government of India.

Rural Health Statistics Bulletin. 2011. New Delhi, India: Government of India.

Strasser, R., (2010). Rural health around the world: Challenges and solutions. *Oxford Journals Medicine Family Practice, 20*(4), 457–463.

Sinha, H., (2000). Health status of Karnataka: The paradox of economic backwardness of health development, *Journal of Development Issues, 3* (1), 34–38.

Verbrugge, G., (1985). Gender and health: An update on hypotheses and evidence. *Journal of Health and Social Behavior, 2*(1), 56–82.

Wilkinson, R. G., (1996). *Unhealthy societies: afflictions of inequality.* London, UK: Routledge.

World Health Organization Report (1985) World Health Status. Geneva, Switzerland: World Health Organization.