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A STUDY ON PUBLIC EXPENDITURE FOR HEALTH CARE IN INDIA

FROM 1997-1998 TO 2012-2013

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ABSTRACT

Human resource is the only active factors of production that activates other factors in an economy. Now a day's human capital at risk regarding their health that in turn makes them to contribute slow or dull to the economic development of a country. This situation is applicable to India too. With the population of 1.21 cores the Indian government spending only 1.3% in terms of GDP to health sector. On the one hand as the Indian government in recent years facing pressure of demand for higher budgetary allocation to health sector, on the other hand government is facing financial crunch. This paper examines governments expenditure for health care based on an annual series data from 1997-98 to 2012-13. It is confirmed that the governments overall health and health related expenditure is increased with low steady growth rate and also it is giving much priority to health sector rather than health related sector which helps in having healthy human capital. Hence this paper suggests the central government to take considerable steps for both the sectors.

KEYWORDS: *Health, Health Expenditure, Health Related Expenditure, Government Expenditure, Human Capital*

INTRODUCTION

"Health is the greatest of all possessions; a pale cobbler is better than a sick king" – Isaac Bickerstaff. When a person pronounces the word 'health', it sounds very simple but maintaining health throughout one's life is no easy task. Health is a multi-functional engine of a human body. Even if one organ malfunctions, it is difficult for a human body to function as a whole.

Health has a great significance from economic point of view. Healthy population is an asset for an economy while ill and aged population is a burden. From the point of view of an individual, health performs dual functions. On one hand, good health represents a value of its own, a target that needs to be reached as closely as possible. On the other hand, there are other aims in life as well such as good health gives good income in labor market. Therefore, the significance of health has been strongly emphasized by a number of international organizations like WHO. According to DSAED's document of New Zealand (2010) improved health contributes to economic growth in the ways of improving productivity, learning, investing, reducing family size, increasing availability of land for productive use and reducing treatment burden. Thus, government must take efforts to prevent disease, prolong life and promote health through the organized efforts and informed choice of society, organizations, public and private, communities and individuals.

Health expenditure is a total expenditure in an economy by both government and private citizens on health related matters. It usually includes expenditure on health care. For improved Health care investment on education, housing, old age security and other social provisions is

essential. Effective contribution and the active participation of the government are essential. Even in the most advanced countries, the role of the government has been extremely critical in assuring that health care becomes universally and more or less equitable. Investment in health care is a necessary social investment without which the large mass of working classes cannot realize good health and contribution to the economy.

Under the Indian Constitution, health care is one of a largest service sectors. The healthcare sector in India can be viewed as a glass half empty or a glass half-full. The challenges the sector faces are sub-stantial, from the need to reduce mortality rates, improve physical infrastructure, necessity to provide health insurance, ensuring availability of trained medical personnel etc. There has been a rise in both communicable/infectious diseases and non-communicable diseases, including chronic diseases. While ailments such as poliomyelitis, leprosy, and neonatal tetanus will soon be eliminated, some infectious diseases once thought to be under control, for example, dengue fever, viral hepatitis, tuberculosis, malaria, and pneumonia have re-turned in force or have developed a stubborn resistance to drugs.

As more and more Indians have started to live a more affluent life and adopt unhealthy diets that are high in fat and sugar, people are prone to non-communicable diseases / lifestyle diseases such as hypertension, cancer, and diabetes that are expected to grow at a faster rate than infectious diseases. In addition, the growing elderly population will place an enormous burden on India's healthcare systems and services. There are considerable shortages of hospital beds and trained medical staff such as doctors and nurses, and as a result, public accessibility is reduced. There is also a considerable rural-urban imbalance in which accessibility is significantly lower in rural compared to urban areas. Women are under-represented in the healthcare workforce.

The health needs of the country are enormous and the financial resources and managerial capacity available to meet them, even on the most optimistic projections, fall somewhat short. India's National Health Policy, 2002 had to make hard choices between various priorities and operational options. It does not claim to be a road map for meeting all the health needs of the populace of the country. Furthermore, it has to be recognized that such health needs are also dynamic, as threats in the area of public health keep changing over time. The policy, while being holistic, focuses on the need for enhanced funding and an organizational restructuring in order to facilitate more equitable access to the health facilities. In addition, the policy is focused on those diseases, which are principally contributing to the disease burden. This is not to say that other items contributing to the disease burden of the country will be ignored; but only that the resources, and also the principal focus of the public health administration, will recognize certain relative priorities. The policy aims to achieve an acceptable standard of good health among the general population of the country and has set goals to be achieved by the year 2015. However, from a global perspective India's public spending on health is extremely low. In 2009 it amounted to just 1.1 per cent of GDP. Further, public spending across states also reveals wide variations. The total health expenditure (combining public funds, private funds and external flows) during this period equaled 4.1 per cent of GDP. The 12th five-year plan (2012–17) aims to increase the public health investment from 1.1 per cent to 2–3 per cent of GDP. In the year 2013 public health investment was 1.3 percent of GDP and the total health expenditure of the nation was 4.0 percent to GDP as per the World Bank data.

STATEMENT OF THE PROBLEM

The concept of human capital has gained relatively more importance in labour surplus countries that include India too. India is naturally endowed with more of labour due to high birth rate under given climatic conditions. Nowadays human capital is at risk regarding their health which limits the quality of life and increases their health expenditure that in turn makes them slow or dull in work because in India people have to depend significantly on private sector for availing different kinds of health services. Therefore the burden of spending for health care falls directly on households and a major part of health care expenditure in India is out of pocket expenditure by people which has strong adverse implication for the poor. With the population of 1.21 crores in India, the government is spending only 1.3 percent in terms of GDP for health sector. When compared to the developed and many developing countries the share of public expenditure in the countries total expenditure on health sector appears to be very low for India and it is lower than other Asian countries like china (3.1), Malaysia (2.2), Srilanka (1.4), Thailand (3.7) and Bangladesh (1.3) in terms of public expenditure on health care as a proportion of the gross domestic product.

SCOPE

The scope of this research is confined only to the Indian public health care expenditure of sixteen years from 1997-1998 to 2012-2013. This study aims to analyze the percentage share and growth of various major categories of public expenditure on health care. They are

medical and public health, family welfare, AYUSH, water supply and sanitation and nutrition. The study analyzes two determinants of health care expenditure that is population and GDP. As the Indian government, in recent years, is facing pressure to increase budgetary allocation to health sector and increase it to 3 percent of GDP, on the one hand government is facing financial crunch on the other hand there is a demand for higher allocation in health sector. Thus owing to its seriousness in present and future, this research paper studied about the status of public health expenditure of India.

OBJECTIVES OF THE STUDY

The main objectives of the study are as follows: To analyze the percentage share of various categories of public expenditure on health care in India during the period of 1997-1998 to 2012-2013, to examine the growth rate of various categories of public expenditure on health care, and to identify the determinants of the public expenditure on health care. This study is based on time series data.

SOURCE OF DATA

The present study covers a period of 16 years from 1997-1998 to 2012-2013.The collection of data has got its own distinctive methodology. The researcher has used only the available secondary data for the analytical purpose. The data were collected from various sources such as from Hand Book of Indian Economy-Reserve Bank of India Website http://www.rbi.org and the Union Budget of India Website http://www.indiabudget.nic.in/.

Two major types of expenditure have been considered for analyzing public expenditure on health care namely, (1) Expenditure on health - Expenditure on health includes medical and public health, family welfare and AYUSH. (2) Expenditure on health related matters - Expenditure on health related includes water supply and sanitation and nutrition. Except for water supply and sanitation other health and health related major heads has minor heads of expenditure separately. The data on health expenditures medical and public health and family welfare were taken from the ministry of health and family welfare services, data on AYUSH was taken from ministry of AYUSH and health related expenditures data water supply and sanitation was taken from department of urban development and ministry of housing and urban poverty alleviation and department of drinking water supply which was latterly named as ministry of drinking water and sanitation. The nutrition expenditure data was drawn from ministry of human resource development latterly its name was changed as department of women and child development in budget document of central government department.

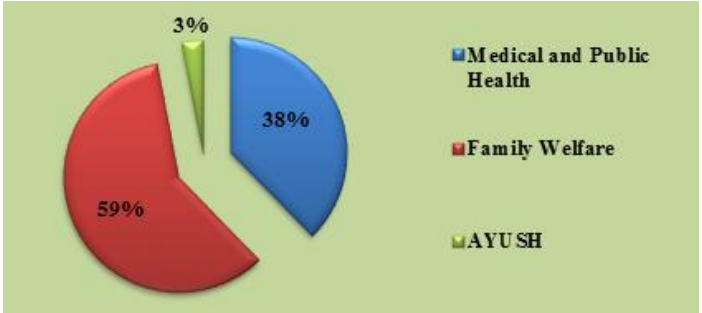
TOOLS OF ANALYSIS

The tools that had been used in this study are Percentage, Annual growth rate, compound growth rate was computed using semi log model. The semi log model $Ln(Y) = a + bt$ is linear in parameters and non-linear in variables. Therefore ordinary least square technique was used to estimate the parameters and multiple regression model was adopted.

HEALTH EXPENDITURE

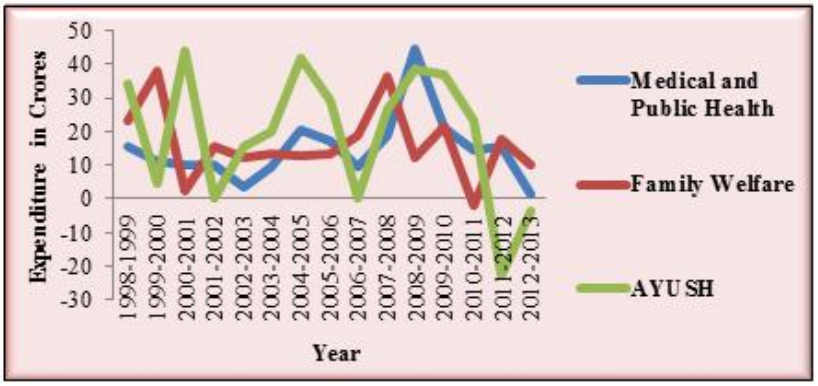
As per the Indian constitution the primary responsibility of providing health care lies with the State governments and bulk of the health expenditure in the country is incurred by them. The Central Government adds to the States' expenditure in areas that are of national interest and are associated with high externalities. Till the mid-nineties the Central government incurred expenditure primarily on family planning, selected disease control programmes, national-level institutes and regulatory bodies for promotion of medical education, training, research and tertiary-level health care. Since the late-nineties due to funding by donors expenditure has been scaled up on maternal and child health and disease control programmes. In 2005 with the initiation of NRHM the Centre has begun to incur a substantial amount of expenditure on health care. The health expenditure by central government was categorized into three major heads namely medical and public health, family welfare and AYUSH.

Figure 1: Expenditure Share of Major Heads - Health



It is evident from figure 1 that the family welfare expenditure accounted for the largest share (59.3 percent) in the total expenditure. The reason for this was family welfare was accorded the highest priority and therefore all its programmes were merged with NRHM. Through this umbrella, the funds are transferred directly to the community. It is a hundred percent centrally funded programme. Health expenditure on medical and public health and AYUSH expenditure's share to the total health expenditure found the places second (37.7 percent) and third (3.0 percent) respectively. Due to the low allocation of resources for AYUSH it has not become very popular in the urban regions.

Figure 2: Expenditure Growth Rate of Major Heads - Health



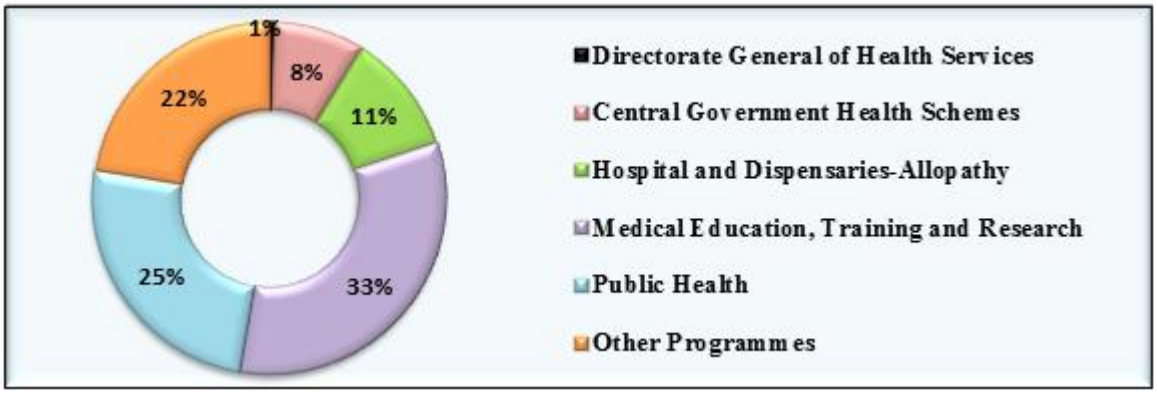
The growth rate of expenditure on medical and public health, family welfare and AYUSH for the years 2008-2009, 1999-2000 and 2000-2001 showed an increasing trend. But in the year 2012-2013 for medical and public health, 2010-2011 for family welfare and 2011-2013 for AYUSH the growth rate of expenditure was very low and negative. The reason is government's reduced expenditure on public health organizations and programmes, other services and supplies of family welfare and ayurveda, homeopathy, naturopathy, yoga, siddha and other programmes of AYUSH respectively to the above mentioned heads. On the whole it is observed that extreme fluctuations were there in central government's allocation for health expenditure.

HEALTH EXPENDITURE OF MEDICAL AND PUBLIC HEALTH

The government in its budget at glance 2002-2003 had recognized medical and public health service as the primary responsibility of the state. Consequent upon the progress made towards planned development there had been a considerable movement in the health services provided for the people by the government in the past 50 years. Medical and public health broadly deals with the public health medical services, medical education, food and drug standards, professional councils, international aid and health research. It deals with the policymaking. Medical and public health and family welfare combined together known as Ministry of Health and Family Welfare (MoH&FW).

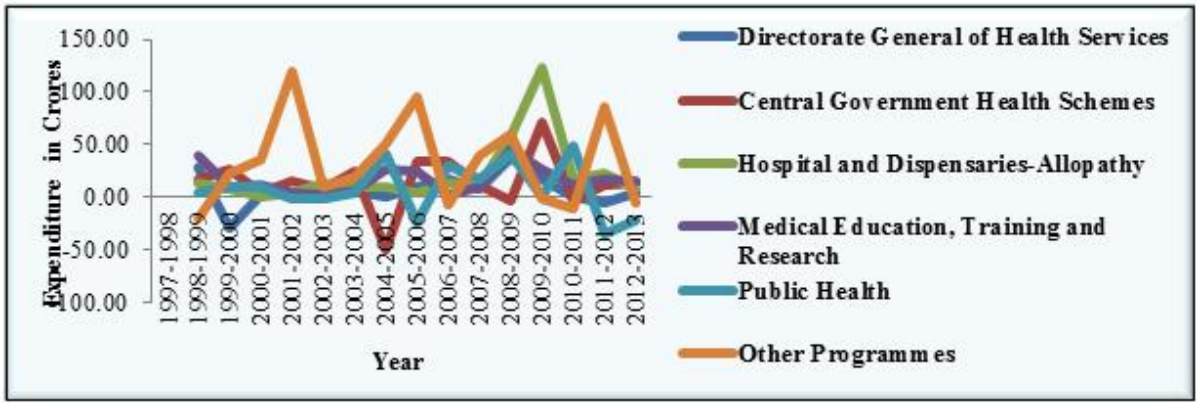
The central Government's expenditure on medical and public health has been categorized into minor heads as (a) directorate general of health services (b) central government health schemes (c) hospital and dispensaries-allopathy (d) medical education, training and research (e) public health programmes, organizations and institutions and (f) other programmes like secretariat and social services, discretionary grants, inclusive of work outlay, setting up of a national illness assistance fund, assistance towards expenditure on hospitalization of the poor, prevention of food adulteration, training programmes, drugs standard control programme, drugs de-addiction programme, national institute of biological standardization and quality control, national medical library, international cooperation, development of nursing services, medical stores organization, lump sum provision for projects of north eastern areas and Sikkim, department of health research, department of AIDS control, national disease control programmes under NRHM, health schemes, aid materials and equipment.

Figure 3: Expenditure Share of Minor Heads – Medical and Public Health



The figure showing that among the minor heads medical education, training and research head has shown highest expenditure share (32.78 percent) to the total medical and public health as constructing and maintaining the medical education and research institutes and hospitals cost is high. In contrary directorate general of health services accounted for the lowest share of expenditure (0.49 percent). This is due to allocation of resources on technical expertise for the implementation of various health programmes and collection, processing and supply of bio medical information is not very expensive.

Figure 4: Expenditure Growth Rate of Minor Heads – Medical and Public Health



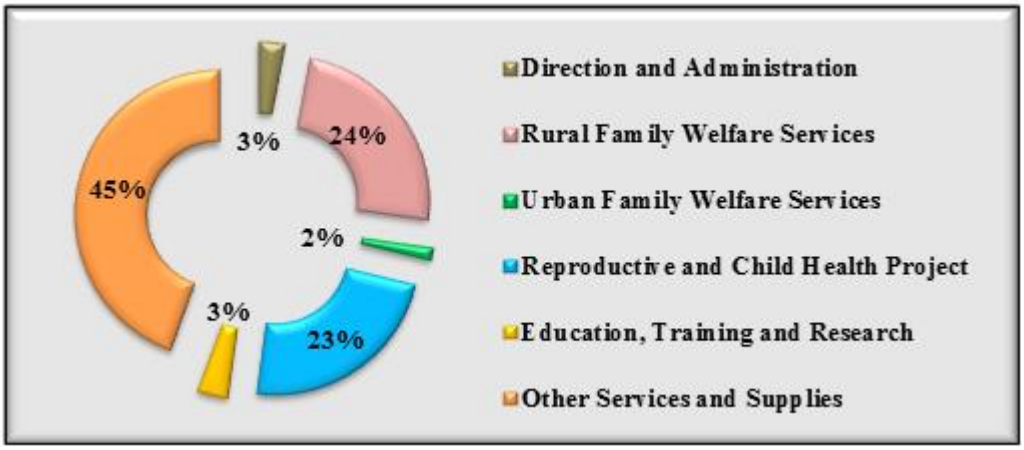
Except for medical education, training and research the growth of expenditure on minor heads showed negative growth rate for particular years this is due to government's fluctuational resource allocation between heads. In 2004-2005 there is no positive or negative growth in central governments expenditure for directorate general of health services which indicating that there is no pressure from technical experts to increase expenditure for implementing various health programmes. The growth rate expenditure of total medical and public health for the year 2012-2013 was very low compared to other years. This is due to governments reduced expenditure for nursing services, mental health programme, Lala Ram Swarup Institute of T.B. and Allied Disease, procurement of meningitis vaccine for inoculation of haj pilgrims, assistance for capacity building for trauma centres, oversight committee, tobacco control programme, telemedicine, prevention and control of diabetes, cardiovascular disease and stroke, programme of deafness, new initiatives, district hospitals and human resources for health. The total medical and public health expenditure by central government increased annually. It indicates that government's effort to increase the quality of people's health.

HEALTH EXPENDITURE OF FAMILY WELFARE

India had launched the National Family Welfare (NFW) program on 1951 with the objective of reducing the birth rate to the extent necessary to stabilize the population of the national economy. The family welfare programs in India had been implemented as a hundred percent centrally sponsored program which was now focusing on rural as well as urban area population's health through NRHM and NUHM. Expenditure under family welfare contains direction and administration, rural and urban family welfare services, reproductive and child health project, education, training and research and other services and supplies which includes the expenditures by

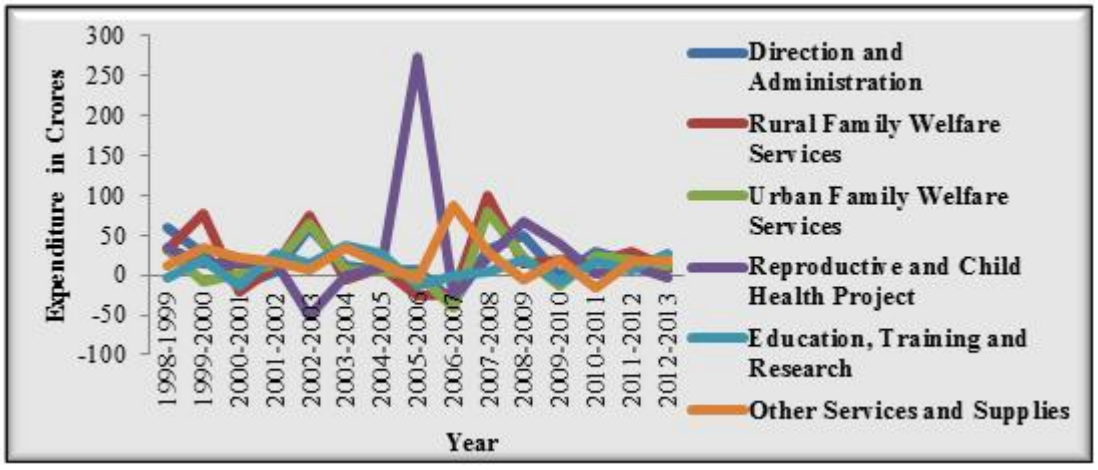
government on secretariat and social services, post partum programme, free distribution of conventional contraceptives, commercial distribution, area projects, involvement of other departments. and voluntary organizations etc, sterilization beds, family planning services and other schemes, investment in public enterprises, procurement of cold chain equipment, strengthening of immunization program and eradication of polio, maternal benefit scheme, transport, compensation, family welfare linked health insurance, lumpsum provision for the benefit of north eastern areas and Sikkim, routine immunization, pulse polio immunization, family welfare under NRHM, flexible pool of state project implementation plans (PIPs) - mission flexible pool, NGOs, management information system national commission on population, social marketing area projects, international contribution.

Figure 5: Expenditure Share of Minor Heads – Family Welfare



The other services and supplies accounted first place in its expenditure share (44.5 percent). This is because government focused on enhancing infrastructural facilities. Urban family welfare accounted very lowest expenditure share (1.55 percent) because private hospitals played an important role in urban areas.

Figure 6: Expenditure Growth Rate of Minor Heads – Family Welfare



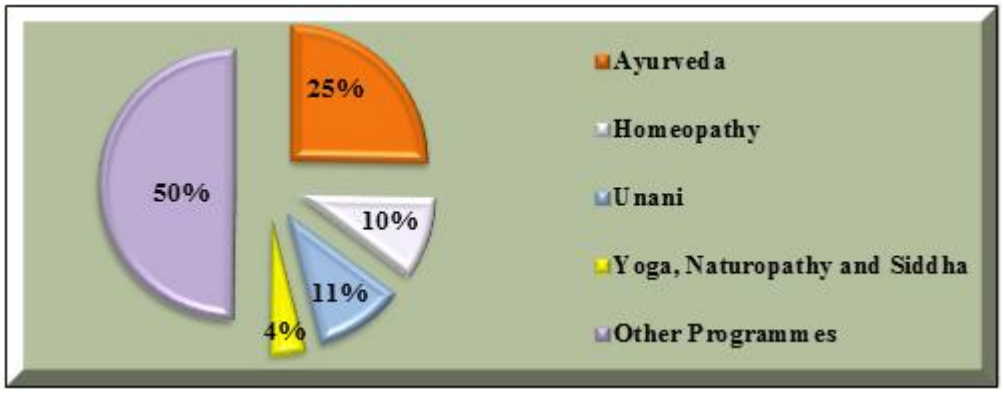
The central government's expenditure on minor heads shows fluctuating growth rate. Pointing on total family welfare it also shows fluctuating expenditure growth rate. Particularly in 2010-2011 its growth was negative (-1.77 percent). Except for 2010-2011 expenditure on family welfare programmes increased in actual terms. After the initiation of reproductive and child health programme (1997) government's expenditure to this major head increased annually.

HEALTH EXPENDITURE OF AYUSH

The umbrella term, Indian Systems of Medicine and Homeopathy (ISM&H), include Ayurveda, Siddha, Unani, Homeopathy and therapies such as Yoga and Naturopathy. Practitioners of ISM&H catered to all the health care needs of the people before modern medicine came to India. The Department of AYUSH envisaged a multipronged approach for achieving the objectives to give focused attention to the development and optimum

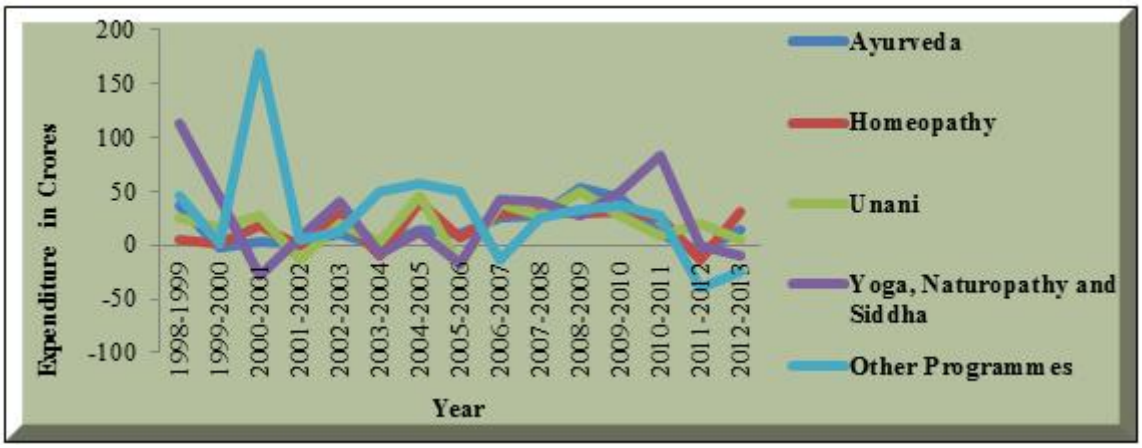
utilization of Indian Systems of Medicine and Homeopathy by way of bringing these systems into the mainstream and gainfully utilizing the vast resources in this sector. The major strength of ISM&H system is that it is accessible, acceptable and affordable. Expenditure under AYUSH includes ayurveda, homeopathy, unani, yoga, naturopathy, siddha and other programmes consist of expenditures by government on secretariat and social services, national medicinal plants board, development of common facilities for AYUSH industry clusters, development of AYUSH institutions, provision for projects for the benefit of the north eastern areas and Sikkim, quality control of ASY and H drugs, hospitals and dispensaries under NRHM, national mission on medicinal plants, investment in public enterprises, provision for AYUSH expansion in CGHS, international exchange programme, TKDL and statutory institutions, central council of Indian medicion (CCIM), up gradation of pharmacopoeial committee on ASU and creation of unified pharmacopoeial commission, PLIM, Ghaziabad a subordinate office under the department, survey on usage and acceptability of AYUSH system, re-orientation training programme of AYUSH personnel/ continuing medical education (ROTP/CME), funding of NGOs for revitalization of local health traditions/midwifery practices/ bone setters/ veterinary care etc, AYUSH and public health, scheme for acquisition, cataloging, digitization and publication of text book and manuscripts, development of AYUSH IT tools, applications and networks.

Figure 7: Expenditure Share of Minor Heads - AYUSH



The government's expenditure on other programmes of AYUSH accounted largest share (49.77 percent). This is because the government focused on enhancing infrastructural facilities and training of physicians, teachers, technicians and research workers in ISM. Yoga, naturopathy and siddha have shown its lowest expenditure share (4.27 percent).From 1997 to 2000 ayurveda has given higher priority followed by other programmes. In the subsequent years expenditure on other programmes was accorded the highest priority.

Figure 8: Expenditure Growth Rate of Minor Heads – AYUSH



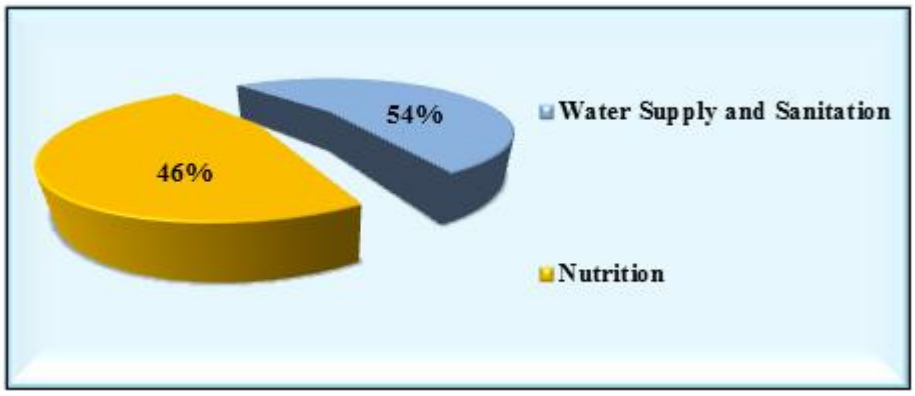
The growth rate of expenditure on AYUSH is fluctuating. In the initial years there was an increasing trend although fluctuations are observed. But from 2010 onwards the growth rate of expenditure was found to be negative. This indicates that the government is slowly opting out from taking responsibility even for important social sector like health.

HEALTH RELATED EXPENDITURE

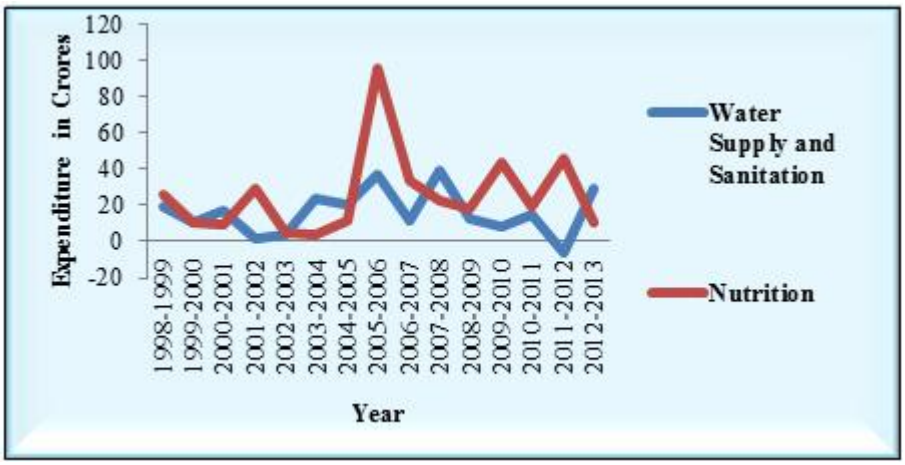
The health related expenditure by central government was categorized as two major heads namely

water supply and sanitation and nutrition. Safe drinking water supply and basic sanitation are vital human needs. Disease, drudgery and death particularly of children every year are directly attributed to the lack of these requirements. The poor specially women and children are the primary victims. Access to safe drinking water and basic sanitation is hence a crucial component of social and economic development. Providing safe drinking water to all habitations is one of the monitorial targets of the Indian five year and annual plans. The most crucial nutritional challenges that India is facing today includes low birth weight due to under nutrition of the mother and foetus, under nutrition and stunting among children and under nutrition in adults, micronutrient malnutrition especially iron, vitamin A and iodine and on the other hand chronic energy excess and over nutrition and associated health problems. India is one among the developing world, beginning to face the phenomenon of nutrition transition that means national health systems need to cope with both the high cost of treating diet-related NCDs and fight under-nutrition. Every year the central government is giving grants to the state governments to meet the needs of people on water supply, sanitation facilities and nutritional life for healthy life.

Figure 9: Expenditure Share of Major Heads – Health Related



It is clear from above figure central government is giving higher priority to health related issues. It is funding almost 50 percent of the water supply and sanitation and nutrition programmes. Water supply and sanitation accounted highest expenditure share (54.1 percent). On the whole, in the initial phase i.e. 1997-1998 its percentage share was 69.78 and declined in 2012-2013 as 44.98 percent. The reason for this decline was government's reduction of provisions to urban water supply and sanitation. In contrary nutrition head accounted lowest percentage share 30.22 in 1997-1998 and increased in 2012-2013 as 55.02 percent. It indicates that women and child development department started to give much priority to nutritional life of children, adolescent girls and women.

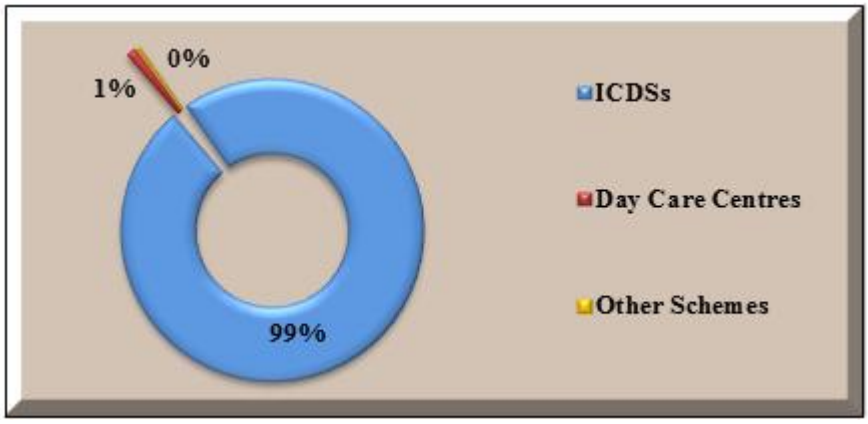


The central government's expenditure on these two heads shows fluctuating growth rate. Especially in 2011-2012 water supply and sanitation's growth went to -5.65 percent. This is due to government's reduction of provisions to both rural as well urban water supply and sanitation. In actual amounts health related expenditures increased annually. It indicates that the government taking efforts for people to have sustainable access of safe drinking water, basic sanitation and nutritional life.

HEALTH RELATED EXPENDITURE OF NUTRITION

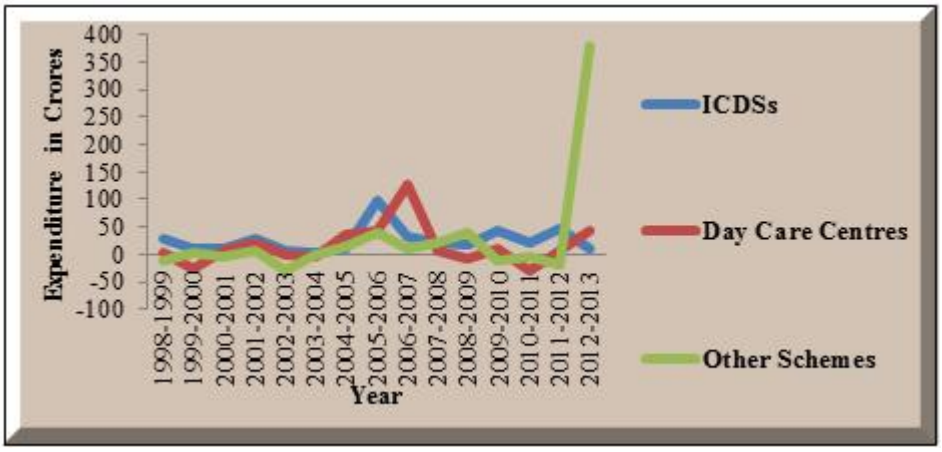
Recognizing the importance of optimal nutrition for health and human development, India adopted multi-sectoral, multi-pronged strategy to combat major public health problems of chronic energy deficiency, iodine deficiency disorders, vitamin a deficiency and anemia due to iron and folate deficiency and to improve nutritional status of the population. Constitution of India states that "the State shall regard raising the level of nutrition and standard of living of its people and improvement in public health among its primary duties". Expenditure under nutrition contains Integrated Child Development Schemes (ICDSs), day care centers and other schemes which includes balwadi nutrition programme, national nutrition mission goals, provision for nutrition scheme for the benefit of north eastern region and Sikkim, food and nutrition board's nutrition education and training activities.

Figure 11: Expenditure Share of Minor Heads – Nutrition



The ICDS's shows highest expenditure share (98.5 percent). The reason was to universalize this scheme the government has approved a cumulative number of 7076 projects and 14 lakh anganwadi centres/mini anganwadi centres including 20000 anganwadi on demand. Day care centres (1.1 percent) and other schemes (0.4 percent) accounted lowest share.

Figure 12: Expenditure Growth Rate of Minor Heads – Nutrition



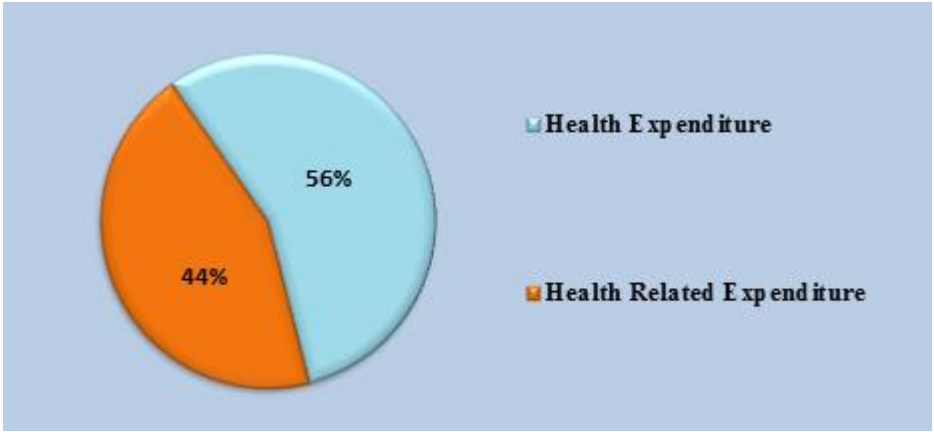
Except ICDS's other two minor heads experienced negative expenditure growth. The minor heads and total nutrition expenditure shows fluctuational growth rate. In 2005-2006 growth rate of ICDS's and total nutrition was very high. The key reason is government started to spend 64.68 crore for expanded Kishori Shakti Yojana (KSY) and 12 crore for newly implemented Karyakatri Bima Yojana (KBY). The table also reveals that government's total expenditure on nutrition was increased in actual terms. This is because of pressure put by Ministry of Women and Child Development on government.

HEALTH CARE EXPENDITURE

Improvement in the health status of the population has been one of the major thrust areas for the social development programmes of the country. This was to be achieved through improving the access to and utilization of medical and public health, family welfare, AYUSH, water supply, sanitation and nutrition services

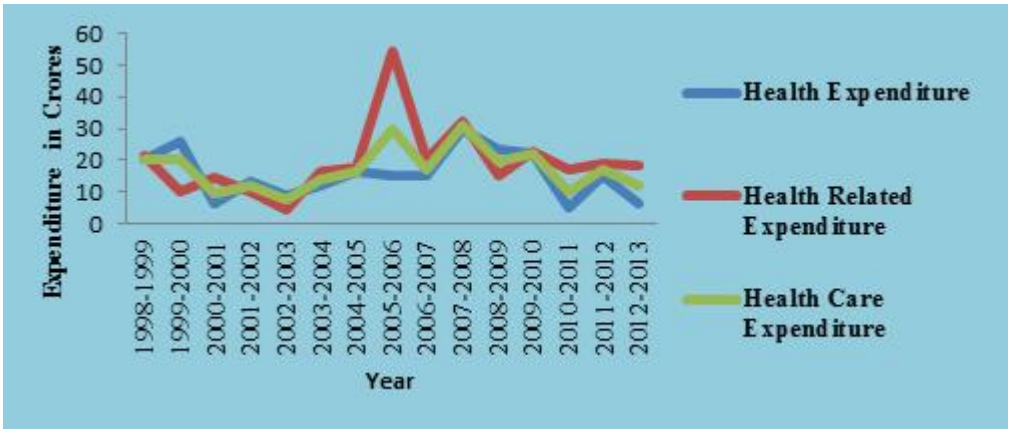
with special focus on underserved and under privileged segments of population. Over the last decades India has built up vast health infrastructure and manpower at primary, secondary and tertiary care in Government, voluntary and private sectors. The population has become aware of the benefits of health related technologies for prevention, early diagnosis, and effective treatment as well as rehabilitation for a wide variety of illnesses and accesses available services. Technological advancement and improvement in access to health care technologies, which were relatively inexpensive and easy to implement, had resulted in steep decline in mortality rate. The enormity of the challenge in health was realized when the eleventh plan (2007-2011) was formulated and an effort was made to increase central plan expenditures on health care.

Figure 13: Expenditure Share of Health Care Categories – Health Care



The health sector accounted for highest expenditure share (55.7 percent) by government. And health related matters cover only 44.3 percent expenditure. The reason is pressure for health services increasing in all states of India rather than health related expenditure. Among all the social service sectors the central government has given due importance to health sector. The government has allocated huge funds both for health and health related expenditure.

Figure 14: Expenditure Growth Rate of Health Care Categories and Health Care



In actual term government's overall health care expenditure showed steady growth rate. In the year 1997-1998 its expenditure was only 5483.78 crore. But in the end 2012-2013 its expenditure was 57826.18 crore. Due to globalization the pressure on the government to improvise the quality of life of human resource was increasing and hence government has given due allocation for the sector although the demands are much higher.

COMPOUND GROWTH RATE OF EXPENDITURE

Table 1: The Rate of Growth of Expenditure on Health and Health Related Major Heads and Total Health Care, India, 1997-1998 to 2012-2013

Variables	β (b)	R^2	Level of Significance	CGR
Medical and Public Health Expenditure	0.144	0.970	0.000	15.49
Family Welfare Expenditure	0.147	0.988	0.000	15.84
AYUSH Expenditure	0.184	0.965	0.000	20.20
Total Health Expenditure	0.146	0.989	0.000	15.72
Water Supply and Sanitation Expenditure	0.154	0.976	0.000	16.65
Nutrition Expenditure	0.225	0.969	0.000	25.23
Total Health Related Expenditure	0.183	0.980	0.000	20.08
Total Health Care Expenditure	0.162	0.988	0.000	17.59

Source: Computed Data, CGR - Compound Growth Rate

The R^2 values for all the variables were more than 0.9. This indicates the log linear method is good fit. At 5 percent level the results are found to be statistically significant. For all variable compound growth rate of expenditure was positive indicator. For AYUSH (20.20), nutrition (25.23), health related expenditure (20.08) and total health care (17.59) it is verifying that the government has taken health very seriously.

Table 2: The Rate of Growth of Expenditure on Health and Health Related Minor Heads, India, 1997-1998 to 2012-2013

Variables	β (b)	R^2	Level of Significance	CGR
Directorate General of Health Services Expenditure	0.070	0.789	0.000	7.25
Central Government Health Schemes Expenditure	0.091	0.800	0.000	9.53
Hospital and Dispensaries – Allopathy Expenditure	0.172	0.853	0.000	18.77
Medical Education, Training and Research Expenditure	0.142	0.967	0.000	15.26
Public Health Programmes Expenditure	0.086	0.811	0.000	8.98
Other Programmes of Medical and Public Health Expenditure	0.279	0.966	0.000	32.18
Direction and Administration Expenditure	0.116	0.899	0.000	12.30
Rural Family Welfare Services Expenditure	0.125	0.851	0.000	13.31
Urban Family Welfare Services Expenditure	0.094	0.842	0.000	9.86
Reproductive and Child Health Project Expenditure	0.162	0.776	0.000	17.59
Education, Training and Research Expenditure	0.093	0.917	0.000	9.75
Other Services and Supplies of Family Welfare Expenditure	0.163	0.956	0.000	17.70
Ayurveda Expenditure	0.149	0.906	0.000	16.07
Homeopathy Expenditure	0.162	0.953	0.000	17.59
Unani Expenditure	0.162	0.956	0.000	17.59
Yoga, Naturopathy and Siddha Expenditure	0.174	0.874	0.000	19.01
Other Programmes of AYUSH Expenditure	0.232	0.884	0.000	26.11
Integrated Child Development Schemes Expenditure	0.227	0.970	0.000	25.48
Day Care Centres Expenditure	0.135	0.786	0.000	14.45
Other Schemes of Nutrition Expenditure	0.082	0.498	0.002	8.55

Source: Computed Data, CGR - Compound Growth Rate

The R^2 values for all the variables were between 0.5 and more than 0.9. This indicates the log linear method is normal fit. At 5 percent level the results are found to be statistically significant. For all variable compound growth rate of expenditure was positive indicator. Between health expenditures other programmes of medical and public health has utmost compound growth rate 32.18 and in health related ICDS's has highest growth rate 25.48. It is indicating that the central government has taken health and health related services very seriously.

FACTORS OF HEALTH CARE EXPENDITURE

To find out the factors determining government expenditure on health care two important influencing factors were taken for this study namely Population and Per capita GDP. To analyze the level of impact of these two variables on government expenditure on health care regression was run. The OLS method $Y_t = \beta_0 + \beta_1 X_{1t} + {}_2X_{2t}$ $t+ {}_3X_{3t} + U_t$ was applied.

Table 3: Determination Analysis of Government Expenditure on Health Care, India, 1997-1998 to 2012-2013

Variables	Independent Variables		R^2
	GDP (X_1)	Population (X_3)	
Total Health Expenditure	1.314*	-371.556	0.98
Total Health Related Expenditure	1.608*	-724.110*	0.98
Total Health Care Expenditure	2.922*	-1095.666	0.98

*Source: Computed Data, * Represents significant at 5 percent level*

The estimated coefficients of GDP (X_1) are significant at 5 percent level which indicates one percent increase in per capita GDP leads to an increase in dependent variables expenditure by 1.314, 1.608 and 2.922. In contrary one percent increase in population by crore not leaded dependent variables expenditure by -371.556, -724.110 and -1095.666. Except for health related expenditure estimated coefficients of population (X_2) are insignificant at 5 percent level. The estimated R^2 values 0.98, 0.98 and 0.98 indicate that two explanatory variables chosen had explained to the extent of 98 percent variation in the public expenditure for all dependent variables.

SUGGESTIONS

In order to increase the government expenditure for health sector the following suggestions are made.

1. A monitoring and evaluating committee at the central and state level has to be constituted to ensure efficiency in health sector.
2. The government must initiate all India health services by employing workers and by setting up more medical and nursing schools particularly in village areas.
3. The government of India should ensure that all Indian citizens should be covered by the health insurance scheme.
4. The government should conduct awareness programmes on healthy life styles so that incidence of life style diseases can be reduced.
5. The government must review and implement the recommendations given by High Level Expert Group.

These are some of the ways that the government can increase health and health related services and stride towards a healthier India.

CONCLUTION

The analysis revealed that government's fund allocation is grossly insufficient to meet the demands of the ever increasing population. Since health is an extremely essential service it should be available and accessible to the entire population. Privatization of health care facilities should be avoided to ensure healthy human capital.

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