IOSR Journal Of Humanities And Social Science (IOSR-JHSS)
Volume 23, Issue 6, Ver. 5 (June. 2018) PP 19-26
e-ISSN: 2279-0837, p-ISSN: 2279-0845.
www.iosrjournals.org

Determinants of Health Care Expenditure in Odisha, Problems and Prospects

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Abstract: Health care is an important issue that attract the attention of the policy makers and the government. Developed countries spend lot on health care in comparison to developing economies. Health care has been taken as both consumer and capital goods. In this paper we have made an attempt to find the various determinants of health care expenditure .The study has been made by taking the help of both primary and secondary data in the study area to find out the determinants that affect the health care expenditure. The study shows there are number of factors that determine the health care expenditure. Among these determinants, income, age of the respondents, health insurance, educational qualification and the family size are the most important factors. We also find from our study, the people in this region prefer government hospitals than the private health care facilities because for lower cost. It is also found from the study that the people have more faith on modern methods of treatment than traditional methods of treatment. From our study also we find that in last few years the government of Odisha made lot of progress on health care.

Key Words: Health care, Health Insurance, Hospitals, Dispensary
JEL Classifications: I11, I13, I 18

Date of Submission: 01-06-2018 Date of acceptance: 18-06-2018

I. INTRODUCTION

People demand health and to produce it, they demand medical care. So the demand for health care is derived demand. Each one of us desire to have good health to participate in work and leisure. There are number of factors that determine health, among which medical care is one. Other factors include social class, work environment, employment status, income, housing conditions, education, diet, lifestyle, and so forth. According to Gossman consumers have demand for health for two reasons. Firstly, health is considered as consumer goods. The consumption of these goods make the consumer feels better. Secondly health is also considered as capital goods. As a consumer good it makes the consumer feel better and happy. As an investment good it increases the productivity capacity and also the man hours available to the consumer which ultimately could be used for productive purposes. Individuals consume health care not because they value health per se, but because it improves their stock of health, which is used as a productive resource. Individuals therefore are not passive consumers of health but active producers of health through their investment in better health, using time and money (Grossman, 1972)

Demand for health care depends upon various factors. At each level, healthcare demand depends on one of the most visible and important being the healthcare cost. According to Feldstein (2011), the patient's demand for healthcare is affected by three broad factors: (i) the illness incidence and need for care; (ii) cultural and demographic characteristics such as age, education, marital status, number of persons in the family, employment status; and (iii) economic factors such as income, direct healthcare cost, and indirect economic burden to the society. Healthcare expenditure is therefore assumed to depend on the morbidity pattern, health status of the patient, and the socioeconomic and demographic characteristics of the household. In health economic literature, income and healthcare cost are seen as important determinants in utilization of healthcare services. Besides the aforementioned three broad factors, other determinants of demand for healthcare also exist, such as quality of care, existence and type of insurance, taste, lifestyle, access to healthcare services—both in terms of cost and distance—and so forth. Anderson's model suggests that people's utilization of healthcare services is a function of their predisposition to use services, factors that enable or impede use, and their need for care (Anderson, 1995).

In this paper an attempt has been made to study the determinants of health care in Odisha and to show the demand and supply gap in the region.

II. REVIEW OF LITERATURE

Demand for health care in India

Demand is seen to reflect both the strength of the person's desire to receive the goods or services and the amount that will have to be sacrificed in order to do so. However, the concept of need in health economics is distinct from that of demand for the services. Need arises when certain illness or disability occurs, a demand exits when an individual has a need and wishes to receive the services. Demand for health care services is not steady in origin. It is irregular and unpredictable. These services afford satisfaction only in the event of ill health which is not a normal state of human beings. Uncertainty about the quality of the health care services and unpredictability of the incidence of diseases add to the problem of defining clearly the demand for health care. Neither the supplier or health care services can lead to cure nor individual attain perfect health. Because of risk, uncertainty is always associated with demand for and supply of good (Arrow, 1963). Unpredictability of demand is another characteristic which is due to uncertainty of the incidence of illness. These peculiarities have far reaching implications in consumer demand theory as applied in health Economics. Wants are made as effective demand through the purchasing power of the consumer. But irrespective of the possession of purchasing power, health services have to be rendered since health demand is mostly need-based and not want based. The demand for health care is desired from the interaction between demand function and production of health (Shanmugasundaram, 2000).

Demand for health care differs from the demand for other goods are more than one respect. The concept attached to theory of demand may not be applicable to demand for health care in the same way as in the case of other goods and services. Due to inexperience, consumer's knowledge about health care is limited. Demand is not only determined completely by price and income but by the occurrence and extent of illness. Even though health care is available at zero or very low cost as in the case of vaccination personal cleanliness, sanitation etc., some people may not be interested in purchasing it. (Burns and Wholey, 1992). This can be described as a case of genuinely low health care demand. This low demand is largely due to lack of awareness of the importance of consumption of the care services for one's own health and on the health of the other people. Individuals may demand two sets of goods and services, which would have implication for their health status; clean water, balanced food, disciplined way of life with physical exercise, treatment in the event of illness etc. contribute to better health status. Smoking, chewing of tobacco and battle nuts, drinks, drugs, etc. obviously adversely affect health status of the persons consuming these goods and having such life style. Apart from economic factors, demographic, social and psychological factors also govern demand for health care. It is seen that health investment in a normal good if the utility function exhibits decreasing absolute risk aversion considering the demand for health care under uncertainty they conclude that there is a pure investment motive for the poor to invest less in their health than rich. (Fieldstein . 1998).

The growth of the Indian economy, with India's changing demographic profile, rise of middle class, shift in the disease patterns and growing awareness of health and fitness are the main factors driving the growing demand for healthcare services in India. The demand for healthcare services in the country has grown from Rs 25,000 crores in 1991 to Rs 175,000 crores in 2006, indicating a compounded annual growth rate (CAGR) of more than 16 per cent. In addition to in-patient and out-patient services in hospitals, this growth has been propelled by ancillary sectors such as retail pharmaceutical, medical and diagnostic equipment and supplies.

While the demand for healthcare in India has been growing rapidly, there is a serious and conspicuous mismatch between demand for and supply of healthcare infrastructure and services, with demand far outstripping the supply and this mismatch is only likely to get worse, unless concrete actions are taken by Government and fully supported by private sector.

Supply of Health Care

On the supply side the concept of health advice reflects the ease or difficulty with which it is possible to change the volume of supply. It also depends on substitutes so that if various forms of health personnel are closely substituted for each other. Health care services are not homogenous. The nature of treatment differs from one doctor to another. All these aspects bring out that health care market is an imperfect market. Hence, the principle of perfect competition needs to be suitably modified to incorporate these aspects of market imperfection while explaining production and supply of health and medical services (Arrow, 1963).

It is also worth noting that producers and suppliers of health and medical care services are also of different types ranging from individual to private organization, non-organization and the government and its agencies. Curative care is provided by physical and paramedical staffs including nurses, midwives in hospitals and clinics, managed either by the private institution, non-government organizations and govt agencies.

Government, local government and voluntary organizations generally provide preventive and promotional services, though the private agencies are also involved in supplying such services (Fieldstein, 1988).

Health care is viewed as an input of medical care industry. It contributes to the production of output as good health. It examines the impact of inputs into the production process on a person's ability to produce good health (Fieldstein, 1973).

There are unusual pricing practices in medical profession with extensive price discrimination by income and other factors. The price of medical care increases rapidly in all the industrial and developing countries (Arrow, 1963). There are four major strategies in medical care reform, to reduce the cost of services. Firstly, there should be increase in supply of medical facilities. This means there should be substantial increase in the number of hospital and physicians. This would bring a reduction in charges and fees either by stimulating increases in productivity or by initially increasing prices and wages. All these may lead to larger supply and decrease in fees and charges in the long run. Secondly, it is argued that more preventive medical health education and environmental improvements could reduce the need for hospital, physicians and drugs. Third approach is being to bring in administrative controls and planning to control cost. Fourth strategy is to induce greater cost consciousness among consumer by modifying health insurance. The other way suggested is to induce physician to control cost. The payment made to the physician on a capitation basis rather than fee for services would reduce costs. Physician may avoid unnecessary operation, which they would have otherwise carried out for getting more income (Fuchs, 1983).

Another issue that has attracted the attention of economists in the context of supply of health care services is the market failure associated with the health sector. Market failure necessitates the intervention of government or the collectively in the supply of health care services. Demand and supply of health care services are not determined in the same way as in case of other economic goods and services. This is because the condition of competitive market is violated in the medical care sectors – there is imperfection in the market for medical care. Market failure led to allocation inefficiency and inequalities in the distribution of health services. These goods and services can further be supplied by the collectively that can internalize the benefits and costs (William 1999).

Thus the issues relating to supply of health care can be studied by looking into the peculiar features of health as an economic good. Recent economic reforms have added newer dimensions to the supply of health. The role of private sector and external agencies in supplying health care services has changed.

III. OBJECTIVES AND HYPOTHESIS

The specific objective of this paper is to identify the various determinants of health care expenditure in Odisha. To address this objective the following research issues have been outlined.

1. What are the different determinants of health care expenditure in Odisha?
2. What are the problems of health care in study area?
3. What are the possible solutions to the problems?

In this paper we have proposed to test, health care demand of an individual depends upon various factors and among the various determinants, the income of the individual, age of the respondents, family size, educational qualification and availability of health insurance are most important factors.

IV. DATA BASE AND METHODOLOGY OF THE STUDY

This paper analyses secondary data collected from various published sources. It also uses primary data collected by applying a four-stage random sampling procedure. Selection of the district, blocks, villages and households constitute the four stages. The data were collected from 150 respondents from 100 households from six villages, two each from three blocks of Cuttack District. Cuttack District was selected because it is one of the advanced districts in the state and it was assumed the people were better aware of about the health care facilities. Secondly the district is equipped with both public and private medical facilities and having one of the premier medical colleges of the state. Care has been taken to elicit reasonably correct information from them by adopting cross questioning and peer group discussion procedures. Simple statistical tools have been employed to analyse the data and draw conclusions there from. Ordinary least squares and liner regression are the most widely used type of regression for predicting the value of one dependent variable from one or two or more than two independent variables. In our analysis the health care expenditure is determined by various factors for that we have used multiple regression analysis. The following formulae have been used for fitting linear regression equations.

$$Y = a_0 + \sum_{i=0}^{n} b_1 x_1$$

$Y = a_0 + b_1 x_1 + b_2 x_2 + b_3 x_3 \ldots\ldots\ldots\ldots b_n x_n + €$

Y = Dependent variable

$a_{0\,=}$ is the constant or the intercept .This is the value that is expected to be there if all the independent variables in the analysis remain constant.
X_1 ……………..X_n are the independent variables used in the analysis.
b_1 is the slope (Beta coefficient) for X_1
€ is the standard error .
We have also used R^2, adjusted R^2 and F statistics for analyzing data.
R^2 is the proportion of the variance in the values of the dependent variable (Y) explained by all independent variables in the analysis. We can call it as the adjusted R square, when the correction has been made to reflect the number of variables in the equation.
F ratio shows whether the equation as a whole is statistically significant in explaining Y.

V. THEORETICAL DEVELOPMENT

In the early sixties the economist started talking about health care demand and started estimating its demand. Demand models during this time were simple reduced form equations derived from the assumption of utility maximisation. The demand for health care was determined by various factors like household income, prices of health care and tastes. Rosenthal (1964) tried to explain and predict the utilisation of short-term and special non-federal hospital facilities in continental United States. The study was based on simple demand theory and the analysis was made by taking simple multiple regression analysis. Some of the determinants which were recognised by Rosenthal were age distribution, marital status, sex distribution, degree of urbanisation, education, race, population per dwelling unit. But the model had certain limitations and rightly pointed out by Goldman and Grossman (1978).It was found out the demand model developed in the 1960s did not take into account the role of time in the demand for health care. Grossman (1972) argued that what individuals demand when they purchase health care is not health care per se but good health. He first constructed a model of demand for health, and then derived the demand for health care from the demand for good health.

The major contribution by Christianson (1976) lies in his recognition of the discrete nature of decisions in health care demand. Christianson argues that in a given period of illness an individual makes three decisions. The first decision that an individual must make after recognising the presence of a health problem concerns the need to seek health care. Next, those individuals deciding to seek health care must choose a particular health care provide

VI. HEALTH CARE SCENARIO IN ODISHA:

Quality and adequate health care services lead to better learning ability, nutritional retention, capability enhancement and standard of living of people. It helps in limiting family size, improving basic amenities and reducing poverty significantly. Health care in Odisha no more remain a chronic challenge. The challenges relating to access, delivery and affordability of health care system were grossly averted by Government intervention in strategic manner .The table -1 shows the availability of health care facilities in Odisha

Table 1: Health Care Facilities in Odisha

Types of Health Facility	Numbers
Medical college and Hospitals	3
District Hospitals	32
Sub-Divisional Hospitals	27
Community Health centers	377
Other Hospitals	79
Infectious diseases Hospitals	5
Cancer institute	1
Training centers	5
Primary Health Centers	1226
Sub Centers	6668
Homeopathic College and hospitals.	4
Homeopathic dispensaries.	561
Unani Dispensaries	9
Ayurvedic Hospitals	2
Ayurvedic dispensaries	619
Ayurvedic College and Hospitals	3

***Source**: Economic Survey, Govt.of Odisha*

Public Expenditure on health care in Odisha

It is important to discuss the financial dimensions of the total expenditure on health care facilities which helps in the prevention, rehabilitation, medical relief programmes etc., with the main objectives to improve the health condition of the population of the state. The government of Odisha by implementing various programmes and plans claims that it is providing the curative, preventive and quality health care services to the people of the state, even to the disadvantages groups from past decades. Several reformulations of the plans and reforms have been done to ensure effective health care service delivery system to make funds for the drugs, medicines, maintenance of buildings, equipments and transport and also to provide health services at primary level of each and every district of Odisha. Table 2 presents the Growth trend of GSDP, Revenue Expenditure and Total Health Expenditure of Odisha from 2002-03 to 2012-13. It reflects that in past decades GSDP of the State has risen consistently, but the total health expenditure of the state has increased marginally. The public expenditure is one of the determinants of health outcomes but there are major constraints. The expenditure which primarily contributes towards improving the health status of its people and any other public spending should be judged on its merits. The overall spending of the state government to improve the health status has been poor. Odisha lags far behind the other states in terms of health indicators. The level of public spending in Odisha is less than those articulated in the Health Policy of Odisha 2002.Compound Annual Growth Rate of GSDP for past two decades has shown a growth of 13.5 per cent in past decades and 12.4 per cent growth in the total health expenditure of the State. It reflects that government is spending less than proportionate on health care services with an increase in the States income.

Table 2: Growth of GSDP and Revenue Expenditure and Total Health Expenditure (at current prices) in Odisha from (1990-91 to 2012-13) (Rs in lakhs)

Year	GSDP	Revenue Expenditure	Total Health Expenditure*
2002-03	5480111	1001468	66311
2003-04	6610014	1086119	67017
2004-05	7772943	1237249	85608
2005-06	8509649	1360353	76389
2006-07	10183947	1577203	83335
2007-08	12927445	1772327	108033
2008-09	14849071	2604969	148604
2009-10	16294643	2891917	194922
2010-11	19446479	2936795	195001
2011-12 (RE)	21589944	3707152	198881
2012-13 (BE)	25874409	4003117	259637
CAGR	13.5%	13.4%	12.4%

Source: GSDP at 2004-05 prices, Economic Survey of Odisha 2012-2013, Government of Odisha

**Total Health Expenditure includes: Medical and Public Health, Family and welfare and Sanitation and Water Supply. (2012-13)*

Health care scenario in study Area

In this section of our paper we want to study the health care scenario in the study area and the preferences of health care facilities.

Table: 3 Health Care facilities in Cuttack.

Types of Health Facility	Numbers
1	**2**
Medical college and Hospitals	1
District Hospitals	1
Sub-Divisional Hospitals	2
Community Health centers	18
Other Hospitals	9
Cancer institute	1
Primary Health Centers	57
Sub Centers	332
Homeopathic dispensaries.	27
Unani Dispensaries	1
Ayurvedic dispensaries	20

Source: *Cuttack.nic.in –Health and family welfare*

The table-3 shows the district of Cuttack has good health infrastructure. The district has one of the most important medical college and hospitals in the state. There are about 57 primary health centres and 332 sub centres. Except primary health centres the district has 18 community health centres and 2 sub divisional hospitals. There are 20 ayurvedic dispensaries and 27 homeopathic dispensaries.

In the district the health care facilities are provided by both the private sector and the public sector. We wanted to know the preference of the people while getting the health care facilities. The table no 4 shows the preference of the people.

Table -4: Preference of Healthcare Facilities

Supplier of Healthcare Facilities	**Frequency**	**Percentage**
1	2	3
Govt. Hospital	73	48.7
Private Hospital	35	23.3
Both Govt. & Private Hospital	27	18.0
Village Quack	11	7.3
None of the above	4	2.7
Total	**150**	**100.0**

Source: Primary Survey

The table – 4 shows that out of the 150 random sample respondent, 48.7% of people prefer the govt. hospital, 23.3% of people prefer the private hospitals, 27% of people depends upon both govt. and private hospital, 11% of the respondent depends upon village quack and whereas 4% of people depend on other source of healthcare facilities. It is also seen that maximum member of the sample respondent depend upon the public hospital. It is explained that 48.7% of households prefer medical care provided by the Govt. hospital because of the free of consultation fees and availability. Maximum numbers high earning of individuals use private hospitals at the time of need because of better care taken by the private health care providers.

The table no 5 shows the reason of the preference of the people for selecting the Govt and private health care facilities. A comparison has been made between the private and the govt. hospitals in the table.

Table – 5: Causes of preferring Govt. And Private Healthcare Facilities:

Types of Facilities	**Govt. Hospital**		**Pvt. Hospital**	
	Frequency	Percentage	Frequency	Percentage
Availability	24	16.0	21	14.0
Better Facilities	15	10.0	75	50.0
Distance	48	32.0	32	21.3
Low Cost	62	41.3	19	12.7
Others	1	0.7	3	2.0
Total	**150**	**100.0**	**150**	**100.0**

Source: Primary Survey

Table – 5 shows that out of the 150 respondent samples, 41.3% peoples preferring govt. hospital and 12.7% people prefers private hospital due to low cost. When 50% peoples depend upon the private hospital for better facilities, only 10% people prefer govt. hospital. Hence, for better facilities peoples prefer private hospital and on low cost basis peoples are preferring govt. hospital.

We also wanted to study the preference of the people while preferring the varieties of medical facilities available in the district. This is shown in the table no 6.

Table -6: Preferences of Medical Facilities

Supplier of Health Care Facilities	**Frequency**	**Percentage**
1	**2**	**3**
Allopathy	120	80.0
Homeopathy	16	10.7
Ayurvedic	7	4.7
Village Quack	5	3.3
None of the above	2	1.3
Total	**150**	**100.0**

Source: Primary Survey

From table – 6, it is observed that a large part of the total population depends upon allopathy healthcare facilities because of their availability and quick response. Poor people could not afford a part of their income to allopathic treatment because it costs more than other treatment. Hence they prefer homeopathic, ayurvedic, village quack and some home based treatment. But depending upon the nature of the disease like several chronic cases they take allopathic.

As Govt. is the major health care service provider in the district and the people prefer govt hospitals than the private hospitals, we wanted to know why the people think the private sector provided better health care facilities than the Govt. sector. This is shown in the table No-7.

Table-7: Problems Faced by the Respondents at Govt. Hospitals

Problems	Frequency	Percentage
Non-availability of Doctors	55	36.66
Non-availability of Medicines	30	20.00
Non-availability of Support staffs	15	10.00
Non-availability of modern health testing equipments	40	26.66
No proper hygienic Condition	10	15.00
Total	150	100

Source: Primary Survey

From the table-7, it is observed that even if there is availability of govt. hospitals, dispensaries but there are non-availability of doctors. This is serious problems in the district. The doctors employed in the dispensaries, most of the times don't come to the dispensaries to treat the people and they prefer to stay in urban centres, for which the health care facilities in the rural areas are affected. It is also found from the table that the govt. hospitals do not have modern heath checking facilities, non-availability of support staff, non-availability of free supply of medicine, no hygienic condition for the patient.

VII. RESULTS AND DISCUSSIONS

There are various factors that determine the amount of health expenditure. Some of the factors we have taken in our analysis are income of the respondents, education level, marital status of the respondent, employment status, age of the respondents, availability of health insurances and family size. To study the impact of various factors on the amount of remittances we have used the Ordinary Least Squares method.

The regression equation is as follows:

$Y = \alpha + \beta 1\ INC + \beta 2\ AGE + \beta 3\ ED + \beta 4\ MS + \beta 5\ EMP + \beta 6\ HI + \beta 7 FS + €$

Estimated statistics for the determinants of health expenditure is presented in Table-8.

REGRESSION RESULTS

Table 8: Estimated Statistics

Variable	Coefficients	T-Value	SE	P-Value
1	2	3	4	5
Dependent				
Amount of health Care Expenditure (Y)				
Independent				
INC	0.504*	6.577	0.007	0.00
AGE	0.152*	2.172	98.686	0.00
ED	0.041	0.581	858.163	0.562
MS	-0.091	-1.221	2680.171	0.224
EMP	0.066	1.082	1950.657	0.318
HI	0.308*	4.271	2229.947	0.00
FS	-0.115*	-1.961	991.004	0.00
Constant	6458.177	1.076	6002.175	0.285
R^2	0.577			
F	27.507			
N	150			

Source: Primary Survey

Notes : * P≤0.01, ** P ≤0.05, *** P≤0.1

Notes: Y= Amount of Health expenditure INC= Income of the respondents, AGE= Age of the respondents, ED= Education level of respondents, MS = Marital Status, EMP = Employment status, HI= Health Insurance, FS= Family Size, , €= error term.

Estimated statistics indicating the relationship between the amount of health expenditure and other variables have interesting revelations. The table shows that the amount of health expenditure by a respondent is positively correlated with income of the respondent i.e., the respondents having more income spend more on health care more than those having lower income. The estimated value suggests a strong and statistically significant relationship between income and the amount of health expenditure. Higher income tends to generate more surplus and hence greater ability to spend on health care. Age of the respondent have a positive co-relationship with health care expenditure. As the age of the respondent increases there is an increase in health expenses. The estimated value suggests a strong and statistically highly significant. Education level and health expenses are directly co-related with each other. As the education level increases, the expenditure on health care also increases. This is obvious, it is because the people having higher education are more concerned about health and spend accordingly. Marital status has a negative relationship with the amount of health expenditure. But the result is not statistically significant. Employment and health expenditure has a positive influence on the health expenditure. Those who are employed they can spend more on health. The result is obvious that variable HI (Health Insurance) has a positive coefficient indicating that those who have health insurances facilities spend more on health or their demand for health care is more. The result is statistically significant. The variable (FS) has a negative and significant influence on the amount of health expenditure. The result is statistically significant.

VIII. FINDINGS

The following are some of the findings from our study.

- There are number of variables that determine the health care in study areas
- Most prominent among these factors are Income, age, and availability of health insurances and family size of the respondents.
- The respondents more of government health facilities rather than private. It is because of Govt hospitals are less expensive.
- Non-availability of doctors in the govt. hospitals disrupt the health facilities in the study area

The above findings prove our hypothesis that, income, age, and availability of health insurances and family size of the respondents determine the health care.

IX. CONCLUSION AND POLICY RECOMMENDATION

In developing economies health care expenditure are comparatively less than the developed countries**.** The public spending in the health sector is essential for the sustainability and accessibility of the health care services. Heath care can be both taken as consumer and investment goods. Good health increases productivity of an economy and help in economic growth process. Demand for health care depends upon various factors. The earlier model on health care was developed by Gossman. In our study we made an attempt to find the factors that determine the health care in study area. It was found there are number of determents of health care like income, employment status, age, family size, marital status and education of the respondents. From our study it was found that income, age, health insurance and the family size are some of the statistically significant factors that determine the health care in the study region. The peoples' preference on the government health care facilities suggests that the government should increase the health care facilities in the study area. Other important findings of our study suggest that the government should give more attention to the modern methods of treatment. The care must be taken to motivate the doctors to join in rural health centers, which is a major problem in most of the rural dispensaries. Non-availability of doctors disrupts the medical facilities in the district.

REFERENCES

[1]. M Grossman(1972), "On the Concept of Health Capital and the Demand for Health", the Journal of Political Economy, 80(2), 223-255.

[2]. Kenneth J. Arrow(1963), "Uncertainty and the Welfare Economics of Medical Care", American Economic Review, 53(5). 941-973.

[3]. Andersen, R. M. (1995). Revisiting the Behavioral Model and access to medical care: Does it matter? Journal of Health and Social Behavior, 36, 1-10.

[4]. Burns and Wholey, (1992). The impact of physician characteristics in conditional choice models for hospital care, Journal of Health Economics 11(1), 43-62.

[5]. Fieldstein, (1973), The Welfare Loss of Excess Health Insurance, Journal of Political Economy, 81(2) , 251-80.[6] Iweifel and Breyer, (1997), "Health Economics", Oxford University Press, 1 - 382

Dr. Mahendra P. Agasty and Bidyadhar Rout "Determinants of Health Care Expenditure in Odisha, Problems and Prospects, IOSR Journal Of Humanities And Social Science (IOSR-JHSS). vol. 23 no. 06, 2018, pp. 19-26.