# Determinants of Health Insurance in rural population of South India

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## ABSTRACT

**Background and objective:** *Health is a fundamental human right in India and several other countries. The policy concern in developing countries such as India where 70% of the population lives in rural area is not only to reach the entire population with adequate healthcare services, but also to secure an acceptable level of health for all the people through the application of primary healthcare programs. Health insurance is one of the most important aspects of health care management system. This paper tries to identify the determinants of health insurance in rural India.*

**Methods:** *A Cross sectional community based study was done with sample size of 290 households estimated by using 25% national coverage according to Public Health Foundation of India. The study was conducted between July 2014 to August 2014. 290 families were covered from two Primary Health Centres which come under field practice area of our medical college. A pretested semi structured questionnaire was used to collect data. Data was entered in excel sheet and analysed using SPSS version 17 software.*

**Results and interpretation:** *In this study 72.5% of respondents were in age group 26-45yrs, 69.4% of respondents were female,82.1% were from below poverty line family,72.4% were from nuclear family, 81% of respondents were aware of health insurance but only 53.1% were actually insured and off the respondents who were not insured 40.9% were not aware of health insurance. The male gender, nuclear family, affordability to pay premium, higher educational status and awareness regarding health insurance was significantly associated with being insured.*

**Conclusions:** *The main determinants of being insured were male gender, nuclear family, affordability to pay premium and higher education status. In order to bridge this gap in rural India of not being insured is to educate them in order to bring about behavior change among the respondents.*

**Keywords:** *Deteminants, Rural and Health insurance*

## INTRODUCTION

Despite large improvements in recent years, life expectancy in India remains below countries at a similar level of development. Health outcomes and service provision vary significantly across states, with only a few providing access to comprehensive basic health care services to everyone. Although public health care in principle offers free basic health care services to all, most states' health systems suffer from insufficient spending and shortfalls in management, leaving many with insufficient care. As a result, most people turn to private health care providers, which vary dramatically in quality and charge for their services. Nevertheless, life expectancy and other health status indicators remain behind most large middle income countries and health outcomes are strongly influenced by socio-economic factors, gender, education and geography[1].

Out of pocket payments (OOP)are an increasingly large share of household budgets, rising from 5% of household expenditure in 1999-2000 to 11% in 2004-05[2]. Drugs are the biggest component of OOPs, accounting for 72% of the total .Though hospital care accounts for a smaller share of total OOPs, it is more likely to bankrupt the poor. More than one third of patients admitted to hospital are pushed into poverty. On average, low income households living in rural areas paid 140% of their annual income in OOPs for a hospital stay compared to 90% for those in urban areas[1], the difference being due in large part to lower rural incomes. As a consequence, some 47% of the cost of hospital admissions in rural areas and 31% in urban areas were financed by borrowing and the sale of personal goods and assets [3]. This financial burden has been one of the key motivations for introducing health care insurance for hospital care for the poor. Although not captured by surveys, informal payments are significant: 20% of public sector hospital visits are reported to involve informal payments and 12% involve the use of influence to access health care [4]

For human resource development health is an important constituent. Healthy citizen is the real wealth of the country. It not only enhances the work force of the country but also reduces the disease burden of the country. The monetary gains are much greater in rural poor people, who are most handicapped by ill health. Health has been declared as a fundamental human right in India along with several other countries. The issue in India is not only to reach but also to secure an acceptable level of health for all its people [5].

Health insurance can be understood as any form of insurance whose payment is contingent on the insured incurring additional expenses or losing income because of incapacity or loss of good health. It is also known as disability insurance, or medical expense insurance. Health insurance is a type of insurance whereby the insurer pays the medical costs of the insured become sick due to covered causes, or due to accidents[6]. The insurer may be a private organization or a government agency. A health insurance policy is a contract between an insurer and an individual or a group, in which the insurer undertakes to provide specified health insurance benefit to the insured in consideration of a fixed price called premium payable either in lump sum or in installments. There are several studies among several issues regarding health insurance in India. However there are very few studies on the determinants of Health Insurance in rural India. The present study is done to fill this gap.

## MATERIALS AND METHODS

**Study Design**: Cross-sectional descriptive study.
**Study setting**: Villages coming under field practice area of two primary health centre.
**Participants**: Household heads or their spouses and in their absence, another senior household member.
**Study period**: 2 months.
**Sample size**: Calculated to be 288 by taking average National health care coverage as 25% according to Public Health Foundation of India.
$n= (1.96)^2PQ/L^2$ and taking allowable error as 20% of 25%.
P: Prevalence / Q: 1-P / L: Allowable error

**Sampling method**:
Total no. of villages: 80 / Total population: 39,404 / No. of PHC's: 2

List of all the villages were prepared according to their population in ascending order and 15 villages were selected by Probability Proportionate to Size and from each village we first numbered the houses and then by Simple random sampling method using random number table method we selected 20 households.

**Data collection**

Prior informed written consent in the local language was taken from all the households included in the study. For those who were illiterates, the consent was read out and explained to them in their own language and consent was obtained by taking their thumb impression in the presence of a witness.
Data was collected by visiting the selected households and carrying out face to face interview by using pretested semi structured proforma which included socio-demographic details and awareness regarding Health Insurance.

**Statistical analysis**: The data collected was entered in Microsoft excel worksheet and was analysed using SPSS software. Descriptive statistics like mean and percentage was calculated.
**Inclusion criteria**:
a) Household heads or their spouse and in their absence another senior household member aged between 15-45 yrs. in rural area who was willing to participate in our study.
b) In case where both husband and wife were present at the time of survey, preference was given to the working household head.
**Exclusion criteria**: a) Household members who were not willing to be part of study b) Seriously ill people at the time of survey.
**Ethical consideration**: Informed consent was taken from the persons before collecting information and an Ethical committee approval was obtained taken from Institutional ethical committee

## RESULTS

Table 1 suggests that most of the study subjects were in the age group of 26 - 45 years that is 72.5%. Male constituted 30.6% of study subjects whereas females were 69.4%. 82.1% of the subjects had below poverty line (BPL) card. Majority of them were from nuclear family 72.4%. In table 2 we can see that although 81% of the respondents were aware about the health insurance but only 46.9% were insured. In Table 3 we can see that about 40.9% of the study subjects who were not insured felt that for payment of premium they were not affordable whereas 31.8% felt that they were uncertain about the health insurance utilization. Table 4 shows the multiple logistic regressions. In this table we can see that the male gender, type of family, affordability to pay premium and higher educational status was significantly associated with being insured insurance.

**Table 1: Socio-demographic characteristic of study subjects**

| Characteristics | Number | Percentage |
|---|---|---|
| **Age (Years)** | | |
| 15-25 | 80 | 27.5 |
| 26-35 | 100 | 34.5 |
| 36-45 | 110 | 38.0 |
| **Gender** | | |
| Male | 89 | 30.6 |
| Female | 201 | 69.4 |
| **BPL Card** | | |
| Yes | 238 | 82.1 |
| No | 52 | 17.9 |
| **Type of family** | | |
| Nuclear | 210 | 72.4 |
| Joint | 80 | 27.6 |

**Table 2: Distribution of study subjects according to awareness and presence of health insurance**

| Characteristics | No. | Percentage |
|---|---|---|
| **Awareness** | | |
| yes | 235 | 81.0 |
| No | 55 | 19.0 |
| **Total** | **290** | **100.0** |
| **Health insurance presence** | | |
| Yes | 136 | 46.9 |
| No | 154 | 53.1 |
| **Total** | **290** | **100.0** |

**Table 3: Distribution of study subjects according to the reasons for not being insured**

| Reasons | No. | Percentage |
|---|---|---|
| Not aware | 40 | 26.0 |
| Not affordable | 63 | 40.9 |
| Uncertainty of utilization | 49 | 31.8 |
| others | 2 | 1.3 |
| **Total** | **154** | **100.0** |

**Table 4: Multiple Logistic Regression Model for Determinants of Health Insurance**

| Sl. No. | Variables | Regression Coefficient | P value |
|---|---|---|---|
| 1 | Age | .0615354 | 0.591 |
| 2 | Male Gender | .0078402 | 0.048 |
| 3 | Nuclear family | -.9326314 | 0.040 |
| 4 | Affordability | .0000632 | 0.000 |
| 5 | Higher Educational status | .0004492 | 0.000 |
| 6 | Awareness | .0132331 | 0.821 |
| 7 | Age_ square | -.0008932 | 0.511 |
| 8 | Constant | -6.310117 | 0.010 |

## DISCUSSION

Insurance in India has come a long way since its inception, yet much remains to make it as available and widely-used as it should be. Insurance is more concentrated in relatively financially stable urban areas, but the requirement for a cushion to absorb risks is greater among rural and urban poor. For the development of the economy, insurance penetration in India should grow, but that growth will be possible only when suitable products become available. The poor and needy find insurance a risky proposition with their uncertain and irregular incomes, and with their limited ability to read about its benefits.The male literacy rate in India in the year 2011 was 82.14 percent; the female literacy rate was only 65.46 percent (Census 2011). Thus, access is not sufficient in rural areas in India.

With multiple logistic regression we can see that the main determinants of health insurance were male gender, being from nuclear family, being affordable to pay the premium, higher education status and being aware about health insurance was associated with being insured. The male gender commonly come in contact with many people in day to day routine activity and are financially independent which could be the reason of their being insured. Nuclear family members have more clear defined roles in the family and have got little income, so by giving little premium they can safe guard their health, probably this could be the reason why nuclear families are statistically more insured. If we see the affordability of the people we can see that those people who were affordable were more likely to be insured this may be due to the fact that these people find it easy to pay the premium. Higher educational status was associated with being insured this may be due to the fact that these people could understand the importance of health insurance.

Charkravarti et al [7] in his study reported that a large section of the rural poor in West Bengal simply avoid health insurance due to their poverty; as they were unable to bear the cost of premium which was in accordance to our study .

Vinod and Saharan et al [8] in their study reported that general public's were slowly becoming aware about the benefits of the health insurance and its importance in today's world which was a similar finding in our study.

Ratna and Sarkar et al[9] in their study reported that rural population treat health as an important aspect and were interested in a health insurance scheme. They reported that High costs of hospitalization and surgery is not posing financial risks for poor households[3], but in our study we found that rural people though were aware about health insurance but only few were actually insured.

Yellaiha et al[10] in their study in found that the main determinants of demand for health insurance in Hyderabad were the occupation, income, health expenditure and awareness which was in accordance with our study.

## CONCLUSION

In our study we found that awareness about health insurance was high among the respondents but still utilization of health insurance was very low. The main determinants of being insured were male gender, nuclear family, affordability to pay premium and higher education status. In order to bridge this gap it is important to educate them in order to bring about behavior change among the respondents. There should be implementation of health insurance policies which can benefit rural India.

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