# **Original Research Article**

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# Subscription of various health insurance schemes and factors influencing them in rural area of central Karnataka: a cross sectional study

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#### **ABSTRACT**

**Background:** In a health insurance program, people who have the risk of a certain event contribute a small amount (premium) toward a health insurance fund. This fund is then used to treat patients who experience that particular event (e.g., hospitalization). It is a form of risk management which is used primarily to hedge against the risk of a contingent, uncertain loss. Health is wealth. Therefore, the concept of health insurance (HI) has evolved which finances health care. Objectives of the study was to assess subscription of various health insurance schemes and factors influencing them in the rural field practice area of SSIMS and RC, Davanagere.

**Methods:** The cross sectional study was conducted in the rural field practice area of SSIMS and RC, Davangere from May to July 2016. A sample of 600 families were visited by systematic random sampling and data was collected from the head of the family with informed consent using a predesigned, pretested questionnaire by house to house interview. Analysis was done by using SPSS v10 and were results presented as percentages and proportions.

**Results:** The total subscription in the study was 69.3%, Yeshasvini co-operative farmers' health scheme coverage was 84% followed by others. The factors determining the subscription were the amount of premium, lack of funds, lack of awareness, lack of comprehensive coverage, etc.

**Conclusions:** The premium has to be customized so that all the patients are benefited irrespective of the type of HI.

Keywords: Health insurance, Rural area, Subscription, Yeshasvini health scheme

#### INTRODUCTION

"Health is wealth". A good health is must for everyone. Man is exposed to various health related risks therefore maintaining one's health is utmost important aspect to face the risks posed unexpectedly. Therefore, the concept of health insurance has evolved which finances health care. In a health insurance program, people who have the risk of a certain event contribute a small amount

(premium) toward a health insurance fund. This fund is then used to treat patients who experience that particular event (e.g., hospitalization). It is a form of risk management which is used primarily to hedge against the risk of a contingent, uncertain loss.<sup>1</sup>

Different services are provided; depending on the type of package a registered users has opted for. The basic services to be provided include outpatient care, drugs,

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pharmaceutical care and diagnostic test, maternity care, preventive care like immunization, consultations with specialists, hospital admission for specified days, dental care, surgical proceedings, etc.<sup>2</sup>

Worldwide the total health expenditure is about 9.94% of gross domestic product (GDP), out of which public spends about 60.1% and 18.2% spent from the out of pocket expenditure (OOP) on health. In the south-east Asian region a total of 4.4% of the GDP is spent on health care, 31.2% of it is spent by the public and the 61.5% is contributed by the OOP from the people. India spends about 4.7% of GDP on health which is much lower than the developed countries such as United States which spends 17% of its GDP on health.<sup>3</sup> According to NFHS4 data the households with any usual member covered by a health scheme is 28.2% among urban, 29.0% among rural area and overall coverage is 28.7%.<sup>4</sup>

In Karnataka, the scheme is merged with the Arogya Karnataka scheme such as Yeshasvini co-operative farmers' health scheme, Vajpayee Arogyashree, Yeshaswini Scheme, Rajiv Arogya Bhagya Scheme, Rashtriya Bala Swasthaya Karyakram (RBSK), Rashtriya Swasthaya Bima Yojana (RSBY) including RSBY for senior citizens, Cochlear Implant Scheme, Mukhyamantri Santwana Harish Scheme and Indira Suraksha Yojane. The scheme is made available across all the government and empanelled private hospitals. Suvarna Arogya Suraksha Trust is implementing the scheme in Karnataka.<sup>5</sup>

Objectives of the study was to assess subscription of various health insurance schemes and factors influencing them in the rural field practice area of SSIMS and RC, Davanagere.

#### **METHODS**

The cross-sectional analytical study is a part of our previous study conducted in the in the rural field practice area of SSIMS and RC, Davangere during May to July 2016.<sup>6</sup> The RHTC consists of 12 villages with 3,365 households composing a total population of 17,495.

The study was done among the permanent residents. By taking National sample survey as reference and taking 14% of prevalence, relative precision of 20%, the calculated sample size was 590 rounded off to 600. The heads of each selected household were interviewed after informed consent using a predesigned pretested questionnaire through systematic random sampling method and the required data was collected until the sample size was reached. The locked houses after three consecutive visits during the study period were excluded and the interview was conducted for the next available household.

#### Statistical analysis

Data was entered in MS excel and analysis was done using SPSS v10 and results were expressed in terms of percentages and proportions.

#### **RESULTS**

In our study more than half of the respondents were in the middle age i.e., 52.8% followed by the adults i.e. 29.5%. Males constituted about 92.5%. Nearly half of the respondents i.e. 45.7% were illiterates and 22.7% of the respondents had finished their high school and only 6.8% were graduates/postgraduates. More than half i.e. 56.3% of the respondents were farmers/shopkeepers by occupation followed by the unskilled workers (i.e. labourers and construction workers) and 8.2% were unemployed (Homemakers/elderly people). According to modified BG Prasad's classification 55.2% of the families belonged to class V socio-economic class followed by 28.0% to class IV and only 1.8% and 3.5% belonged to class I and II respectively. Nuclear families constituted 66% of the total families followed by joint (17.2) and 3generation families (16.8). The total subscription of health insurance under different schemes was found to be 45.5%.

Table 1: Health insurance schemes subscribed by the families (n=273).

insurance	Frequency	<b>%</b>
Yeshasvini co-operative farmers' health scheme	229	83.9
Rashtriya Swasthya Bima Yojana(RSBY)	14	5.1
Rajiv Aarogyasri Community Health Insurance Scheme	3	1.1
Employee state insurance scheme(ESI)	1	0.4
ICICI LOMBARD	14	5.1
Sampoorna Suraksha Yojana (SKDRDP)	9	3.3
STARHEALTH	3	1.1
	Rashtriya Swasthya Bima Yojana(RSBY) Rajiv Aarogyasri Community Health Insurance Scheme Employee state insurance scheme(ESI) ICICI LOMBARD Sampoorna Suraksha Yojana (SKDRDP)	Yeshasvini co-operative farmers' health scheme229Rashtriya Swasthya Bima Yojana(RSBY)14Rajiv Aarogyasri Community Health Insurance Scheme3Employee state insurance scheme(ESI)1ICICI LOMBARD14Sampoorna Suraksha Yojana (SKDRDP)9

Table 1 shows that majority of the families were found to have subscribed the Yeshasvini co-operative farmers' health scheme i.e. about 84% followed by others such as RSBY, ESI etc. Among the private health insurance schemes 5.1% of the families have subscribed the ICICI

LOMBARD, Shri Kshetra Dharmastala Rural Development Project (SKDRDP). Three fourth of the respondents had bought health insurance schemes by themselves and through agent in the rest of the families i.e. 26.7% (Table 2).

**Table 2: Mode of subscription of health insurance.** 

Mode of subscription	No. of families	%
Self (through cooperative society or GDP)	200	73.3
Agent	73	26.7
Total	273	100.0

Majority of the respondents (77.3%) expressed their willingness to pay a premium of Rs. 100 to 250/- per person per year whereas only 3.2% of respondents were ready to pay more than Rs. 500/-. The mean amount of premium preferred to pay was Rs. 294/- and the median premium preferred was Rs. 250/- by the families (Table 3).

Table 3: Amount of premium preferred to pay by the surveyed families.

Premium /Person /year (In rupees)	No. of families	%
100-250	464	77.3
251-500	117	19.5
>500	19	3.2
Total	600	100.0
Mean premium	294 Rupees	
Median premium	250 Rupees	

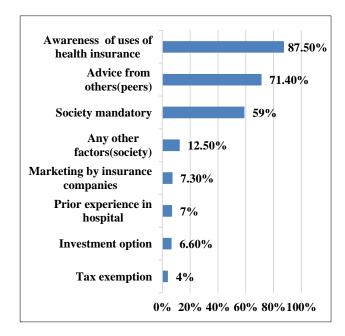


Figure 1: Reasons for subscription of health insurance.

Figure 1 depicts that 87.5% of the respondents said that they have subscribed the health insurance as they knew its uses, followed by 71.4% of respondents who said that they have subscribed because of others advice (Friends and family) and 59% of respondents subscribed as a society mandatory. The other reasons were marketing by the insurance companies, prior experience in the

hospitals, as an investment option and only 4% of them subscribed as a tax exemption.

Majority of the respondents i.e. 76% said that lack of money/low funds was the reason for non-subscription followed by 56% who replied that difficulty in availing services in the hospitals was the reason. About half of the respondents i.e. 53.3% were unaware of the health insurance and about more than 40% of them said there is lack of comprehensive coverage, and would like to invest in some other areas and other 42.7% did not wanted to buy as they felt no need of it (Figure 2).

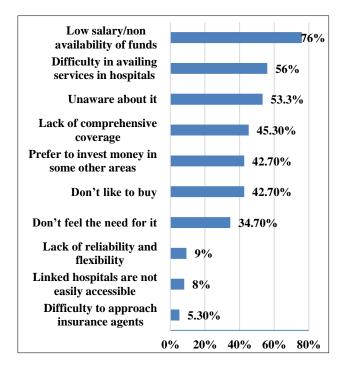


Figure 2: Reasons for non-subscription (n = 75).

#### DISCUSSION

The present study was undertaken to assess the subscription of various available health insurance schemes and the factors determining their subscription and its non-subscription in our study area.

The most of the respondents or the heads of the families belonged to middle age group (41-60 years) i.e. 52.8%, and 29.5% in the adult age group (26-40 years) which was similar to study done by Holyachi et al and Netra G et al. 6.8 Whereas in other studies of Yellaiah et al, most of the respondents were in the age group of 31-40 years of age (38.7%) followed by 20-30 years of age (34%). Likewise it was variable in other studies conducted by Kasirajan et al, Choudary et al, and Indumati et al. 1,10,11 Majority of the respondents were males (92.5%). This finding was similar to other studies conducted by Madhukumar et al, Yellaiah et al, Chethana et al, Holyachi et al, Indumathi et al, and Shafie et al. 1,8,9,12-14,18

It was also observed that majority (66%) belonged to nuclear families in the present study which was similar as other studies done by Bawa et al, Yellaiah et al, Chethana et al, and Holyachi et al. 15,9,13,7 Where as in studies carried out by Indumati et al, Madhukumar et al, and Harshal et al, majority were joint families. 1,12,16

In the present study 54% were literates and 46% of the respondents were illiterates. According to modified BG Prasad's classification, 55.2% of the families belonged to class V (poor) socio economic class followed by 28.0% belonging to class IV (lower middle), which is similar to studies done by Chetana et al, Holyachi et al, Bawa et al, and Madhukumar et al. <sup>12,13,7,15</sup> In the present study majority of the study population were farmers (56.3%) and unskilled workers (labourers =19.8%) by occupation which was similar to study done by Choudary et al. <sup>11</sup>

The awareness about the study was 65.7% among the studied population and subscription by the families who are aware was 69.3% and the rest 171 families (30.7%) did not have health insurance in spite of having awareness about the health insurance. This can be attributed to the lower socio-economic condition of the participants in the present study as more than 3/4th of the respondents i.e. 76% were lack of money/low funds was the reason for non-subscription followed by 56% who replied that difficulty in availing services in the hospitals was the reason, more than 40% of them said there is lack of comprehensive coverage. These findings were higher than the other studies conducted by Indumati et al, Reshmi, Nair et al, Choudary et al and Madhukumar et al. 1.17,11,12

In the present study of the total families who had subscribed health insurance. 90.5% subscribed government health insurance schemes and among them about 84% (229) of the families have subscribed the Yeshasvini co-operative farmers' health scheme followed by Rashtriya Swasthya Bima Yojana (5.1%). Among 9.5% of the families who have subscribed private health insurance schemes, 5.1% of the families have subscribed the ICICI LOMBARD health insurance scheme followed by the Sampoorna Suraksha Yojana of the Shri Kshetra Dharmastala Rural Development Project (SKDRDP) which is non-governmental organisation.

The subscription of Yeshasvini co-operative farmers' health scheme by majority of our study participants could be attributed to the fact that majority of the residents were farmers by occupation and belong to lower socio economic class and are not affordable to pay high premium of the private health insurance schemes. This was in agreement with another study conducted by Indumati et al whereas in a study conducted by Reshmi, Nair et al respondents were covered under various health insurance plans like, Mediclaim and Medicare, ESIS and CGHS, hospital-based health care plans and medical reimbursements from their respective employers etc. in which there was a wide variation in the type of health

insurance subscribed as their study was done in urban area where majority of the participants preferred private over government health insurance schemes.<sup>1,17</sup>

In the present study, 90.5% of the insured families preferred government health insurance schemes compared to private health insurance schemes which is because of the easy subscription method and the low premium paid. Our findings were similar to the findings of a similar study done by Ajmal khan in Tiruchirapalli and Kasirajan, were 58% of the study population preferred government health insurance schemes over private schemes (31%), which was statistically significant.<sup>18</sup>

In the current study, 87.5% of the respondents said that they have subscribed the health insurance as they knew its uses, followed by 71.4% of respondents who said that they have subscribed because of others advice (Friends and family) and 59% of respondents subscribed as a society mandatory. The other reasons were marketing by the insurance companies, prior experience in the hospitals, as an investment option and only 4% of them subscribed as a tax exemption.

Most of the respondents i.e. 76% said that lack of money/low funds was the reason for non-subscription followed by 56% who replied that difficulty in availing services in the hospitals was the reason. About half of the respondents i.e. 53.3% were unaware of the health insurance and about more than 40% of them said there is lack of comprehensive coverage, and would like to invest in some other areas and other 42.7% did not wanted to buy as they felt no need of it.

In the present study, 77.3% of the respondents expressed their willingness to pay a premium of Rs. 100 to 250/- per person per year followed by 19.5% of respondents who said they would pay Rs. 251 to 500/- and only 3.2% of respondents were ready to pay more than Rs. 500/-. The mean amount of premium preferred to pay was Rs. 294/- and the median premium preferred was Rs. 250/- by the families. Our findings were similar to a study conducted in Bahraich district of Uttar Pradesh by USAID in 2008. 19 Our findings were lower compared to other study conducted by Madhukumar et al, Ankit Jain et al, Dror et al and Senthil et al, which is attributed to their lower socioeconomic status and low income. 12,20-22

In a similar study carried out in Nigeria by Obinna Onwujekwe et al, less than 40% of the respondents were willing to pay for CBHI membership for themselves or other household members. The proportions of people who were willing to pay were much lower in the rural communities, at less than 7%. The average that respondents were willing to pay as a monthly premium for themselves ranged from 250 Naira (US\$1.7) in a rural community to 343 Naira (US\$2.9) in an urban community.<sup>23</sup>

#### **CONCLUSION**

The total subscription of various health insurance schemes in the current study was 65.7%, were majority of the families surveyed had covered by Yeshasvini cooperative farmers' health scheme (84%) followed by Rashtriya Swasthya Bima Yojana, Rajiv Aarogyasri Community Health Insurance Scheme, Employee state insurance scheme and other private insurance schemes such as ICICI Lombard, SKDRDP and STARHEALTH.

The factors which determined the subscription were the amount of premium to be paid for the subscription, lack of funds, lack of awareness, difficulty in availing the services in the hospitals, lack of comprehensive coverage and few others dint feel the need of health insurance and rest wanted to invest the money in others.

Most of the respondents had bought the health insurance by themselves (73%) and the mean amount of premium preferred to pay was Rs. 294/- and the median premium preferred was Rs. 250/- by the families.

#### Recommendations

There is extensive need for the advocacy regarding the benefits of having a Health insurance scheme for the families which has to be done by the health insurers itself or the peer groups. As the rural people lack awareness, there should be widespread advertisements through newsletters, pamphlets, advertisements in TV etc.

More enrolment and registration centres should be set up in each villages for easier accessibility and feasibility in enrolling for health insurance. The amount of premium should be customized to individual level by the government and private health insurance companies as majority of the families belonged to lower socioeconomic classes.

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