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DETERMINANTS OF AWARENESS OF HEALTH INSURANCE AMONG LOWER INCOME GROUPS OF PUNJAB: AN ECONOMETRIC ANALYSIS

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Abstract: *Health insurance could play a vital role to improve the health status of the country. But the awareness and perception of health insurance is still preliminary in India. Thereby, the present study endeavors to examine the awareness of health insurance and its determinants among the lower groups. The study was based on primary data collected from urban districts of Punajb: Amritsar, Jalandhar and Ludhiana. The analysis was made with the probit multivariate regression and descriptive statistics. The result shows that 43 percent of the respondents were aware of health insurance and the main source of awareness of health insurance was the agents, friends, bazaar or local people and family. The result of probit regression shows that awareness of health insurance depends on education, income, awareness of other forms of health insurance and health shocks. A low level of awareness and understanding was observed among the respondents. In order to increase the penetration of health insurance the government, policy makers and the marketers of health insurance should make people aware about the potential benefits of health insurance policies.*

Keywords: *Awareness, Determinants, Health Insurance, Sources.*

INTRODUCTION

Economic policy has to strike a balance between the goals of economic growth and human welfare (Economic Survey, 2014). Despite of the high economic growth, India is the home to one third poor population of the world (Yojana, 2014) and ranks 136th on human development index (Economic Survey, 2014). On one hand, the country is gripped with communicable and non-communicable disease while on the other hand health care costs are escalating, making access to quality health care more difficult (Bharati, 2011; National Institutes of Health, 2011). Government hospitals provide basic care only and often lack adequate infrastructure (Desai, 2009). A hospitalized in India spends more than half the total expenditure on healthcare; 40 percent of them have to borrow money, sell assets for the payment of healthcare and 25 percent of hospitalized fall below the poverty line due to high expenditure on healthcare (James, 2004; Bhat & Jain, 2006). More than 70 percent

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of the health care expenditure is out of pocket (Desai, 2009; Nagpal, 2014) and reliance of high out-of-pocket healthcare expenditure pushed many households below poverty line (Yojana, 2014). Therefore; it is required to develop an alternative mechanism which can protect poor from catastrophic situation. Health insurance can be an effective tool of personal protection (Bhat & Jain, 2006). But India's insurance market still lags behind other countries in terms of penetration (Dutta, 2012). Development of health insurance should be prioritized in the country. However, health insurance can bridge the gap in the health care services but the awareness of health insurance in India still not reached to the level of subscription.

The current state of India's healthcare involves high out-of-pocket spending, inequality of services and fragmented social and regulatory standards. However, private health insurance still has a key role to play in shaping goals of access, cost and quality. A focused approach encompassing public and private players will play a disruptive role in the healthcare transformation ahead (Cognizant, 2014). The basic function of a health insurance programs is to increase access to healthcare and to protect households from high medical expenses at the time of illness. Rise in penetration of health insurance in India can also bring disruptive change in the healthcare financing in the country. Awareness of health insurance is significant to influence its demand. Thereby, the present examines the awareness of lower income groups towards health insurance. To accomplish the objective, the paper has been divided into five broad sections. Section II, deals with review of literature related to awareness of health insurance. Section III, describes the research methodology adopted for the present study. Section IV, explained the empirical findings. Section V, concludes the discussion along with policy implications.

REVIEW OF LITERATURE

Reshmi (2007) examined the awareness of health insurance in an urban south Indian population in south India. It was observed that 64 percent of the respondents were aware of health insurance policies. There exists an association between religion, type of family, occupation, family income per month, educational status and socio-economic status. Gurunathan and Mohanasundari (2010) analyzed the perception and awareness of health insurance of private companies in Erode city. It was found that age, income level, marital status and earning member significantly associated with the awareness. The two main sources of awareness of health insurance policies were newspapers and magazines. Okaro et al. (2010) assessed the knowledge and attitude towards the national health insurance scheme among the radiographers of south east, Nigeria. All of the radiographers were aware of the national health insurance scheme. The main source of awareness of health insurance was seminars conducted in the hospitals. The positive attitude was observed among the sampled respondents and believed that national health insurance scheme was capable to improve healthcare delivery in Nigeria. Bawa and Ruchita (2011) conducted a study

to examine the awareness and willingness to join for health insurance in Punjab. It was found that 91.3 percent of the respondents were aware of health insurance policies, but the subscription of health insurance was very low. The study highlighted that the main barriers to subscribe health insurance policies in Punjab were lack of funds to meet costly affair; lack of awareness and willingness to join; lack of intermediaries' outreach and capabilities; lack of reliability and comprehensive coverage; lack of availability and accessibility of services; narrow policy options; and prefer other mode to invest (followed by friends, relatives etc). NCAER (2011) conducted an insurance awareness campaign in 29 states and 9 union territories (in rural and urban areas) of India. The study revealed that awareness of health insurance was directly associated with education and income of the respondents. Madhukumar (2012) identified the perception and awareness of health insurance in Nandagudi village in Bangalore. The survey revealed that only one third of the respondents were aware of health insurance. The main sources of health insurance were TV, newspapers and health workers. Awareness of health insurance depends on education, socio-economic status and occupation of the respondent. Yellaiah (2012) identified the determinants of awareness of health insurance in Hyderabad city of Andhra Pradesh. It was found that 33.5 percent of the respondents were aware of health insurance policies. The important sources of health insurance were newspapers followed by family/friends, TV, insurance agents, radio and internet respectively. The main determinates of health insurance was religion, type of the family, education, occupation, annual income except the type of the family. It was also found that income and education were positively associated with the awareness of health insurance. Choudhary et al. (2013) found the awareness, sources of awareness and determinates of health insurance in villages of Jamnagar. The result reveals that 57 percent of the respondents were aware of health insurance and source of awareness of health insurance were agents followed by television, radio, family/friends, newspapers and radio respectively. The study indicates an association between gender, education, occupation, socio-economic class and awareness of health insurance. Those who enrolled with health insurance perceived it as a refund of cost of drugs during illness followed by money return with interest when policy mature, compensation if something bad happens and makes life easier. Ghosh (2013) examined the awareness and willingness to pay for health insurance in Darjeeling district. It was found that 34.5 percent aware of respondents were aware of health insurance and only 18.5 percent of them subscribed for it. The main source of awareness of health insurance were agents and tax consultant followed by family and friends, TV and doctor respectively. It was found that marital status and income of the respondents were positively associated with willing to pay for health insurance but education was negatively associated with it. Aami and Ahmad (2013) analyzed the awareness, willingness to buy and barriers in the subscription of private health insurance in Pakistan. It was found that 82 percent of the respondents heard of health insurance mainly

from friends and insurance agents followed by television, newspapers and family. The main barriers to enroll health insurance was difficult to approach insurance agents, inadequacy of knowledge on the part of insurance agents, behavior of insurance agents, accessibility and service quality of linked hospital, lack of reliability and lack of flexibility.

RESEARCH METHODOLOGY

(a) Questionnaire Design, Sample Selection and Data Collection

The study was based upon primary data collected from Amritsar, Jalandhar and Ludhiana. For the collection of data, a structured questionnaire was prepared. The first part of the questionnaire deals with demographic information of the respondent. Second part of the questionnaire related to awareness of health insurance and various sources of awareness. The variables of awareness of health insurance were derived from the previous studies and these variables were frequently tested in different parts India and recognized as standard variables. The respondents of the study were 210 vendors selected from three districts of Punjab (Amritsar=70, Jalandhar=70 & Ludhiana =70). These respondents were employed in the informal sector of India. In the present study, workers employed in the informal sector were selected due to the fact that they are more prone to illness and at the same time due to low and irregular nature of income are unable to pay for illness; they need health insurance more frequent than others. The respondents from the three districts were selected randomly.

(b) Statistical Methods

The analysis of the data has been made with the help of descriptive statistics and Probit multivariate regression analysis. Probit regression is frequently applied when the dependent variable has binary response. The dependent variable was awareness of health insurance and measured as 1 = Aware of health insurance and 0 otherwise. The description of the independent variables was defined in table 1:

Empirical Analysis

Table 2 shows the demographic profile of the respondents. It was found that the respondents of up to 30 years were 27.6 percent, 31-40 years 21.0 percent, 41-50 years 27.6 percent, 51-60 years 16.2 percent and 60 years & above were 7.6 percent. Majority of them falls under annual income group of 50001- 1,00,000. About 78.6 percent of them were married, majority of them were Sikh followed by Hindu. Majority of the respondents were above primary but up to secondary followed by illiterate, up to-primary, without formal education, senior secondary, graduation and post-graduation.

Table 1
Description of Explanatory Variables

Variable	*Description*	
Gender	1 = Male, 0 =Otherwise	
District	Jalandhar=1, Ludhiana=2, Amritsar=0	
Marital Status	Single = 1, Others =2, Married =0	
Age	Up to 30 years=1 , 31-40 years=2, 41-50 years =3, 51-60 years =4, Above 60 years=0	
Occupation	1=Vendors, 2= Shopkeepers, 0=Construction worker	
Religion	Hindu=1, Others=2 ,0=Sikh	
Caste	General = 1 , OBC = 2 , 0=SC	
Type of Family	1= If household lives in a joint family, 0 =Otherwise	
Saving Account	1 if household having saving account , 0 = otherwise	
Education	No formal education but can read & write =1, Up to primary (class 5)=2 Above primary, up-to secondary =3, Senior secondary school =4 Graduate = 5 Post graduate = 6, 0 =Illiterate	
Income	Up to ₹ 50,000 = 1	₹ 50,001-1,00,000 =2
	₹ 1,00,001-1,50,000= 3	₹ 1,50,001-2,00,000 =4
	₹ 2,00,001-2,50,000 =5	0 =otherwise
Household Size	4-5 members =2	6-7 members =3
	8-9 members =4	More than 9 =5,
	Up to 3 members =0	
Holding BPL Card	1 =If household had BPL card , 0 =Otherwise	
Saving Account	1 =If household had saving account , 0 =Otherwise	
Distance to Health Facility	Measured in km	
Outpatient Care	1 =If household experienced outpatient care, 0= Otherwise	
Wage Loss due to Outpatient Care	1= If household suffered wage loss due to outpatient care, 0 = otherwise	
Hospitalization	1= If household experienced hospitalization, 0 =Otherwise	
Wage Loss due to Hospitalization	1= If household suffered wage loss due to hospitalization, 0 = Otherwise	
Chronic Disease	1 =If household had chronic disease, 0 =Otherwise	
Wage Loss due Chronic Disease	1 =If household suffered wage loss due to chronic disease, 0 = Otherwise	
Awareness of General Insurance	1= If household aware of insurance (Other than health), 0 =Otherwise	
Enrollment of General Insurance	1= If household enrolled with insurance (Other than health), 0 =Otherwise	

Source: Authors' Illustration.

Table 2
Demographic Profile of the Respondents

Variable	*Percentage (N=210)*
Age	
Up to 30 years	27.6
31-40 years	21.0
41-50 years	27.6
51-60 years	16.2
Above 60 years	7.6
Annual Income	
Up to ₹ 50000	9.0
₹ 50001- ₹ 1,00,000	69.5
₹ 1,00,001- ₹ 1,50,000	19.5
₹ 1,50,001- ₹ 2,00,000	1.9
Marital Status	
Single	17.1
Married	78.6
Divorce	1.0
Widow	3.3
Religion	
Sikh	61.0
Hindu	30.5
Muslim	6.2
Christian	2.4
Education	
Illiterate (No education)	21.4
No formal education (but can read & write)	6.2
Up to Primary (Class 5)	20.0
Above Primary, Up-to Secondary	41.4
Senior Secondary School	4.8
Graduate	3.3
Post Graduate	2.9

Source: Author's Calculation Based on Primary Survey

Majority of the respondents in study were illiterate followed by up to-secondary, primary, without formal education, senior secondary and graduation and post-graduation. Table 3 reveals the awareness of health insurance among the vendors and it was found that 42.9 percent of the vendors aware of health insurance. The main source of awareness was agents, friends followed by T.V, bazaar/ local people, family, employees of insurance company, doctors and hoardings/billboards. The finding of this study were not consistent with the finding the previous research that majority of the respondents were aware of health insurance (Bawa & Ruchita 2011; Reshmi 2007; Aami & Ahmad 2013; Choudhary et. al. 2013). It may be due to the fact

that in the previous studies respondents were employed in the formal sector and in the present study they belong to informal sector. The most common source of awareness about health insurance among the respondents was agents followed by friends, local people, family, TV, newspaper, employee of insurance company and hoarding/ billboards. Probit multivariate regression was employed to identify the significant variables to influence the awareness of health insurance.

Table 3
Awareness of Health Insurance

	Particulars	*Percentage*
Awareness of Health Insurance	Yes	42.9
	No	57.1
Sources of Awareness	Agents	27.8
	Friends	27.8
	TV	17.8
	Bazaar / Local people	23.3
	Family	10.0
	Newspaper	6.7
	Employee of insurance company	8.9
	Doctors	2.2
	Hoardings / Billboards	1.1

Source: Author's Calculation Based on Primary Survey

Table 4 describes the perception of health insurance of the vendors. The results reveal that20.7 percent each money back at sudden death of insured person, 19.6 percent of the respondents assumed health insurance as payment received by the family after death of the insured, 16.2 percent money return with interest when premium paid, 14.5 percent insurance provides more money when required, 13.4 percent provides compensation if something bad happens, 8.9 percent money back after complete duration of insurance, 5.0 percent insurance refund of cost of drugs during illness.

Table 4
Understanding of Lower Income Groups towards Health Insurance

Understanding About Insurance (N=210)	*Percentage*
Money back at sudden death of insured person	20.7
Payment received by the family after death of the insured	19.6
Money return with interest when premium paid	16.2
Insurance provides more money when required	14.5
Provide compensation if something bad happens	13.4
Money back after complete duration of insurance	8.9
Insurance for health, refund of cost of drugs during illness	5.0
Total	100

Source: Author's Calculation Based on Primary Survey

Table 5 underlines the socio-economic determinists of awareness of health insurance in India. The table predicts the results of the coefficient, standard error and p-value.

Table 5
Probit Multivariate Analysis of Socio-Economic Determinants of Awareness of Health Insurance

Variable (Reference Values in Parentheses)	*Coefficient*	*Std. Error*	*p-value*
District (Amritsar)			
Jalandhar	-0.253	0.286	0.376
Ludhiana	-0.351	0.284	0.217
Gender (Female)			
Male	-0.114	0.570	0.842
Marital Status (Married)			
Single	-0.452	0.305	0.138
Others	-0.812	0.573	0.156
Religion (Sikh)			
Hindu	-0.396	0.288	0.169
Others	-0.684	0.466	0.143
Caste (SC)			
General	0.430	0.330	0.193
Others	-0.275	0.741	0.710
Type of Family (Nuclear)			
Joint	-0.561*	0.315	0.075
Education (Illiterate)			
No formal education but can read and write	-0.121	0.511	0.813
Up to primary	0.194	0.345	0.574
Above primary and up to secondary	0.291	0.308	0.344
Senior Secondary	1.270**	0.623	0.042
Graduate	-0.199	0.552	0.718
Post Graduate	0.792	0.587	0.177
Annual Income (Upto 50000)			
₹ 50001-100000	0.590	0.397	0.137
₹ 100001-150000	0.344	0.482	0.475
₹ 150001-200000	1.774*	0.962	0.065
₹ 200001-250000	0.210	1.037	0.839
Household Size (Up to 3)			
4-5	0.678	0.535	0.205
6-7	0.170	0.391	0.665
8-9	-0.521	0.996	0.601
9 and Above	1.254	0.864	0.147
BPL card	-0.086	0.257	0.737
Saving Account	0.613**	0.263	0.020
Healthcare Variables			
Distance to Health Facility	-0.004	0.046	0.933

contd. table

Variable (Reference Values in Parentheses)	*Coefficient*	*Std. Error*	*p-value*
Experienced outpatient Care	0.276	0.237	0.245
Wage Loss due to outpatient care	-0.148	0.615	0.809
Experienced Inpatient care	1.062***	0.372	0.004
Wage loss due to inpatient care	-0.752**	0.377	0.046
Experienced Chronic Disease	0.136	0.248	0.583
Wage loss due to chronic Disease	-1.410**	0.704	0.045
Insurance Variables			
Awareness of Insurance	1.558***	0.449	0.001
Enrolled with Insurance	-0.514**	0.245	0.036
Constant	-2.297**	1.069	0.032
Number of observations	210		
LR chi^2 (38)	76.59		
Prob> chi^2	0.0003		
Log Likelihood	-105.116		
Pseudo R^2	0.2670		

Source: Author's Calculation Based on Primary Survey
***Significant at 1 percent, **Significant at 5 percent, *Significant at 10 percent

The result shows that out of the different variables type of family, education, income, saving account, experienced inpatient care, wage loss due to inpatient care, wage loss due to chronic disease, awareness of insurance and purchase of insurance were significant determinants of awareness of health insurance. Education of the respondent was positively associated with the awareness of health insurance. Hence it can be concluded that respondent who are educated were significantly more aware of the health insurance. Income was found significant determinant of awareness of health insurance. Hence it can be concluded that respondents with income group of 150001-200000 were significantly more aware of health insurance than with a income of up to 50000. Holding of saving account positively influences the awareness of health insurance. The result shows that out of the different healthcare variables, respondents who experienced inpatient care, experienced wage loss due to chronic disease and wage loss due to chronic disease were significantly more aware. Insurance variables also significantly affect the awareness of health insurance. Hence it can be concluded that respondents who were aware of insurance and enrolled with some kind of insurance were significantly aware of health insurance. The study predicts that education played an important role to create awareness of health insurance. The respondents with higher education were more aware than with less education. The result of our study was consistent with the previous studies that education was associated with the awareness of health insurance (Madhukumar 2012; Reshmi 2007; NCAER 2011; Choudhary et. al. 2013). The present study supported that income was associated with awareness of health insurance, but the results of this study was opposite to the previous studies which says that income was positively associated with

awareness of health insurance (Gurunathan & Mohanasundari, 2010; Reshmi, 2007; NCAER, 2011). It was also found that type of family and household size was not associated with the awareness of health insurance. Some of the studies found these variables significant to influence the awareness of health insurance (Madhukumar 2012; Reshmi 2007). The study supported the fact that marital status was found to be significant variable to influence the awareness of health insurance (Gurunathan & Mohanasundari, 2010; Reshmi, 2007). The finding of the present study indicated that those respondents who experienced outpatient care and lost wages due to outpatient care were significantly aware of health insurance policies.

CONCLUSION

Awareness of health insurance was regarded as a vital parameter to raise its penetration Due to low public expenditure on health in India; out of pocket health care expenditure is very high. To reduce high out of pocket expenditure, need is to develop health insurance in India. But awareness penetration of health insurance is still preliminary in India. To address this, a major awareness campaign needs to be launched through government and private media to sensitize the workers employed in informal sector. To create awareness about the benefits of health insurance and need of insurance to the larger public (what is health insurance? why health insurance is needed? who can be insured?). There is need to transform the attitude and to translate knowledge into behavior by guiding/making them aware on the various procedures and policies associated with its enrollment of health insurance decisions. This will not only increase the awareness but also helpful to enhance the confidence and trust of people on various aspects of health insurance. Once the penetration of health insurance increases, the catastrophic out-of-pocket health expenditure will go down which can improve the quality of life among women.

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