Awareness and Willingness to Pay for Health Insurance: An Empirical Study with Reference to Punjab India

Dr. Sumninder Kaur Bawa
Sr. Lecturer
Department of Commerce and Business Management
Guru Nanak Dev University, Amritsar, Punjab. India
Email: skbawa_gndu@yahoo.com, Phone: +91- 9855808866

Miss Ruchita (Corresponding author)
Senior Research Fellow
Department of Commerce and Business Management
Guru Nanak Dev University, Amritsar, Punjab. India
Email: verma.ruchita2000@gmail.com, Phone: +91- 9872802628

Abstract

The present study is an effort in the area of health insurance and the peculiar feature of it lies in multi-dimensions. As firstly, it examines the respondents who are aware or not aware about health insurance as well as various sources of awareness; secondly, those who are aware have subscribed it or not; thirdly, those who have not subscribed what are the reasons behind the same; and last but not least are they willing to join and pay for it? The study was conducted in Punjab and 600 questionnaires were got filled from randomly selected general public, out of which 563 found to be suitable for analysis. The results shown low level of awareness and willingness to join and seven key factors are barrier in subscription of health insurance. Moreover significant association exist between the gender; age; education; occupation; income of respondents with their willingness to pay for health insurance.

Keywords: Awareness, willingness, Association, health insurance and barriers.

1. Introduction

Socio-Economic development and health of community are related with each other in such a way that it is impossible to achieve one without other i.e. one cannot be achieved in isolation. No doubt, the economic development in India is gaining momentum over the last few decades because of the government initiatives in public health care facilities, yet its health system is at crossroad today. As these initiatives' outcome are only moderate by international standards, because India is ranked 118 among 191 WHO members countries on the basis of overall health performance. To a large extent the health indices of a country is determined with reference to the ways with which its health care gets financed. Although, in India the total health care expenditure is increasing steadily, but the mix of public and private spending is a major area of concern (Bhat and Jain, 2006). As the various studies reveal that in India more than 80 percent of health care's expenditure is borne by individuals i.e. health care financing is mainly in the form of out-of-pocket which gradually pushing them in to a vicious circle of poverty. In such a situation health insurance is a widely recognized and preferable mechanism to finance the health care expenditure of the individuals. The credit for the origination of concept of health insurance goes to Hugh the Elder Chamberlen from the Peter Chamberlen family, who proposed it for the first time in the year 1694.

In the late 19th century "accidental insurance" began which operated much like modern "disability insurance". It was firstly offered by Franklin Health Assurance Co of US, which was founded in 1850. It provides coverage for the accident arising from rail, road and steamboat accident. This payment model continued until the start of 20th century in some jurisdictions (like California), where all laws regulating health insurance actually referred to disability insurance (Source: http://en.wikipedia.org/wiki/Health_insurance). As far as the stage of development of health insurance in India is concerned, it is in the embryonic stage. As the people of India are not much aware about it and very few part of the population is taking the advantages of it. Moreover those who are aware about it are not actively participating for one reason or another and thereby making it difficult to bring it to the stage of expansion. Beside this, very few insurers are actively venturing in it and thereby making it difficult to construct inroads for health insurance in India. But there is terrible need of health insurance in India as the World Bank Report reveals that 85% of the working populations in India do not have Rs. 5,00,000 as instant cash; 14% have Rs. 5,00,000 instantly but will subsequently will face a financial crunch; Only 1% can afford to spend Rs. 5,00,000 instantly and easily; and 99% of Indians will face financial crunch in case of any critical illness.

Hence the need for health insurance in India cannot be overlooked (www.healthinsuranceindia.org).

2. Review of literature

Various studies related directly or indirectly with the objectives of the present study were reviewed. **Purohit and Siddiqui (1994)** examined the utilization of health services in India by making the comparison of Indian states in terms of low, medium and high household expenditure on health care and concluded that there is no serious government initiative to encourage utilization of health services by means of devising health insurance. **Sanyal (1996)** examined that the burden of health care expenditure in rural areas was twice in 1986-87 as compared to 1963-64 and also provided that household is the main contributor to the financing of health care in India, so the health planners would have to pay more consideration regarding this. **Gumber and kulkarni (2000)** undertaken a case study in Gujarat and provided that SEWA a type of health insurance scheme is strongly preferred by those who can't afford and also not access the services of various other schemes. **Asgary, Willis, Taghvari and Refeian (2004)** estimated the demand and willingness to pay for health insurance by rural households in Iran and concluded that a significant percentage of population (more than 38%) live in rural areas, but the health care insurance currently operating in urban areas.

In order to provide rural areas with same level of protection as urban areas, the difference would have to be subsidized. **Ahuja and De (2004)** confirmed that the demand for health insurance is limited where supplies of health services is weak and explained interstate variation in demand for health insurance by poor in relation to variation in healthcare infrastructure. Beside this the study also provided that healthcare infrastructure is positively related to demand for health insurance by poor, whereas the proportion of Below Poverty Line (BPL) population is negatively related. In order to build demand for health insurance, it is necessary to address the demand side and at the same time design the insurance schemes by taking into consideration the paying capacity of the poor. **Ahuja and Narang (2005)** provided an overview of existing forms and emerging trends in health insurance for low income segment in India and concluded that health insurance schemes have considerable scope of improvement for a country like India by providing appropriate incentives and bringing these under the regulatory ambit. The study suggested that in order to develop health insurance for poor in a big way, health care provisions need to be strengthened and streamlined as well as coordination among multiple agencies is needed.

Dror (2006) laid seven myths regarding health insurance and examined the realities behind these myths. The evidence shown that most people are willing to pay 1.35% of income or more for health insurance and the solvent market for health insurance business exist in India; however tapping of it is contingent upon understanding the customer's needs and wants. **Dror (2007)** examined why the "one-size-fits-all" health insurance products are not suitable to low income people in India and provided that there is presence of considerable variability to pay for health insurance which is because of multiple reasons like variability in income, frequency of illness among households, quality and proximity of providers (private, public) in different locations. **Joglekar (2008)** examined the impact of health insurance on catastrophic out-of-pocket (OOP) health expenditure in India and taken zero percent as threshold level to define and examine such impact. It showed that in India, OOP health expenditure by households account for around 70% of total expenditure on health and thereby pushes households in to poverty. **Garg and Karan (2009)** assessed the differential impact of out-of-pocket (OOP) expenditure and its components between developed and less developed regions in India. The results showed that OOP expenditure is about 5% of total households' expenditure (ranging from about 2% in Assam to 7% in Kerala) with higher proportion in rural areas. Further in order to reduce OOP expenditure targeted policies are needed which in turn could help to prevent almost 60% of poverty.

3. Objective of the study

The present study is an effort in the area of health insurance to assess the individuals' awareness level and willingness to join and pay for it. With a view to develop a sound theoretical framework for investigation, a review of literature regarding health insurance in India and abroad has been made. Although the present study is an effort in the same direction yet it differs in terms of its peculiar features of multi-dimensions. As firstly, it examines the respondents who are aware or not aware about health insurance as well as various sources of awareness; secondly, those who are aware have subscribed it or not; thirdly, those who have not subscribed what are the reasons behind the same; and last but not least are they willing to join and pay for it? So the study has been conducted basically with the following objectives in mind:

- To assess the awareness echelon regarding health insurance as well as various sources of awareness for it.
- To examine and explore the various factors which act as barriers and ultimately obstruct the subscription of health insurance.
- To determine the willingness to join and pay for health insurance by non health insurance holders.

Besides this, in the present study following hypothesis has been formulated and tested:

H_o: There is no significant association between the gender of respondents and their willingness to pay for health insurance.

H_{o1}: There is no significant association between the age of respondents and their willingness to pay for health insurance.

H_{o2}: There is no significant association between the marital status of respondents and their willingness to pay for health insurance.

H_{o3}: There is no significant association between the education level of respondents and their willingness to pay for health insurance.

H_{o4}: There is no significant association between the occupation of respondents and their willingness to pay for health insurance.

H_{o5}:There is no significant association between the income of respondents and their willingness to pay for health insurance.

4. Data Base and Research Methodology

For the purpose of present study specified area selected on the assumption that specific area based studies expected to give more meaningful and significant information. Accordingly the present study was done in Punjab. It was planned to give true representation of three belts of Punjab, viz., Majha, Doaba and Malwa. Hence one district from each of three belts was selected. The districts included in sample were Amritsar from Majha, Jalandhar from Doaba and Ludhiana from Malwa. Thereafter selection of sample of respondents was made by following random sampling and on the whole a sample size of 600 respondents was planned from the general public. In the view of fact that in the present study general public has been considered as unit of investigation, a sample framework consisting of equal number of respondents from each of the district has been taken. In other words the questionnaire were got filled from 600 respondents (200 respondents from each of the district), out of which 563 was found to be suitable for the purpose of analysis

The data has been collected from the general public by administering the self-structured questionnaire from them. The preliminary draft of the questionnaire was pretested on 50 respondents. This helped in improving the questionnaire and also gave an indication as to kind of responses that would be forthcoming with few addition and deletion; the final questionnaire was developed and used for collection of information from respondents. The analysis of data collected has been carried out by using simple frequencies, multiple frequencies and percentages for multiple responses as well as weighted average scores has been calculated. Beside this the use of factor analysis and chi-square has been made to draw the meaningful inference from the study. All this was done with the help of SPSS software package.

4.1 Chi-square: The Chi-square statistics is used to test the statistical significance of the observed association in a cross-tabulation. It assists us in determining whether a systematic association exists between two variables. The null hypothesis **H_o** is that there is no association between the variables. The test is conducted by computing the cell frequencies. These expected cell frequencies, denoted**f_e**, are then compared to the actual observed frequencies *fo*, found in the cross-tabulation to calculate the chi-square statistics. The greater the discrepancies between the expected and actual frequencies, the larger the value of the statistic. Assume the cross-tabulation has r rows and c columns and a random sample of n observation. Then the expected frequency for each cell can be calculated by using a simple formula shown below in equation (1):

$$f_e = \frac{n_r n_c}{n} \quad \text{.....(1)}$$

Where n_r = total number in the row, n_c = total number in the column, n = total sample size

Then the value of chi-square is calculated by using the formula shown in equation (2):

$$\lambda^2 = \sum_{\substack{all \\ cells}} \frac{(f_0 - f_e)}{f_e} \quad \text{.....(2)}$$

An important characteristic of the chi-square statistics is the number of degrees of freedom (df) associated with it. In general, the number of degree of freedom is equal to the number of observations less than number of constraints needed to calculate a statistical term. In the case of chi-square statistic associated with a cross-tabulation, the number of degree of freedom is equal to the product of number of rows (r) less one and the number of columns (c) less one i.e. df = (r - 1) x (c - 1). The null hypothesis **H_o** of number of association between the two variables will be rejected only when the calculated value of the test statistics is greater than the critical value of chi-square distribution with the appropriate degree of freedom (Source: Malhotra, 2007).

4.2 Factor Analysis: It is a general name denoting a class of procedures primarily used for data reduction and summarization. Relationship among set of many interrelated variables are examined and represented with the help of factor analysis. The approach used in the factor analysis is "Principle Component Analysis". In this component analysis, the total variance in the data is considered. The diagonal of the correlation matrix consists of unities and full variance is bought in to factor matrix. It determines the minimum number of factors that will account for maximum variance in the data for use in subsequent multivariate analysis. The factors are also called principal components. Although the initial or unrotated factor matrix indicates the relationship between the factors and individual variables, it seldom results in factors that can be interpreted, because the factors are correlated with many variables. Hence the variance explained by each factor is redistributed by rotation. The method used for rotation in this study is "Varimax". It is a method of factor rotation that minimizes the numbers of variables with high loading on a factor, thereby enhancing the interpretability of the factors (Source: Malhotra, 2007).

5. Empirical Results its Analysis and Interpretation

Table 1 shows the personal profile of the respondents

Gender	**Frequency**	**Percentage**
Male	441	78.3
Female	122	21.7
Total	563	100
Age	**Frequency**	
Less than 30	174	30.9
30-40	210	37.3
40-50	100	17.8
Above 50	79	14.0
Total	563	100
Marital Status	**Frequency**	
Single	222	39.4
Married	341	60.6
Total	563	100
Type of Family	**Frequency**	
Joint	152	27.0
Nuclear	411	73.0
Total	563	100
Education	**Frequency**	
Illiterate	4	0.7
Primary	9	1.6
Middle	17	3.0
Matric	51	9.1
Higher Education	158	28.1
Graduation	192	34.1
Post Graduation	114	20.2
Vocational	6	1.1
Other	12	2.1
Total	563	100
Occupation	**Frequency**	
Employed	182	32.3
Self employed	93	16.5
Labour	51	9.1
Housewife	86	15.3
Unemployed	45	8.0
Professional	73	13.0
Family owned business	24	4.3
Retired	9	1.6
Total	563	100
Income per annum	**Frequency**	
Less than Rs 50000	179	31.8
Rs 50000-100000	167	29.7
Rs 100000-150000	95	16.9
Rs 150000-200000	84	14.9
Above Rs 200000	38	6.7
Total	563	100

A significant proportion of the sample was male members. Majority of the respondents belonged to the age groups of 30-40 years and were married and living in nuclear families. Maximum respondents were graduate followed by higher education and post graduation and were employed.

As far as level of income is concerned a major percentage of the respondents were having annual income of less than Rs. 50000.

5.1 Awareness, exposure and knowledge of respondents for health insurance: Although health insurance is not a new concept and people are also getting familiar with it, yet this awareness has not reached to the level of subscription of health insurance products.

Table 2 shows the awareness level and sources of awareness for health insurance

	Particulars	**Frequency**	**Percentage**
Awareness about health insurance	Not Aware/ not exposed	49	8.7
	Aware/exposed and subscribed	109	19.4
	Aware/exposed and unsubscribed	405	71.9
	Total	563	100
	Particulars	**Responses**	**% of Responses**
Sources of Awareness	TV	281	26.5
	Newspaper	225	21.2
	Agents	189	17.8
	Family	73	6.9
	Friends	111	10.5
	Movies	63	5.9
	Employee of insurance company	93	8.8
	Tax consultants & Doctors	14	1.3
	Any other	13	1.2
	Total	1062	100

It is clear from the table 2 that people had already heard about health insurance yet a significant proportion of the respondents i.e. 71.9% are still without any form of health insurance and presently only 19.4 % were having health insurance. Moreover there are number of sources creating awareness regarding health insurance. Mainly the source of awareness is TV followed by newspaper, agents, friends, employees of insurance companies etc.

5.2 Barriers in the subscription of health insurance: Unlike reasons for having health insurance, there are numerous reasons for not having health insurance i.e. there are number of factors which act as barriers in the subscription of health insurance. All these reasons/barriers were taken in the form of variables and respondents who are without health insurance were asked to give their response on five point likert scale ranging from strongly agree to strongly disagree. Where 5 signifies strongly agree, 4 signifies agree, 3 signifies indifferent, 2 signifies disagree and 1 signifies strongly disagree. Thereafter factor analysis was run in order to condense these variables. All these variables along with their description are shown in the table 3.

Table 3 shows the list of variables along with their description

Variable	**Description**
V1	Low salary/non availability of funds
V2	Don't like to buy
V3	Don't feel the need for it
V4	Prefer to invest money in some other areas
V5	Unaware about it
V6	No one suggested about it
V7	Not taken by friends, relatives etc
V8	Saving in some other areas to meet health care needs
V9	Lack of comprehensive coverage
V10	Lack of reliability and flexibility
V11	Difficulty to approach insurance agents
V12	Inadequacy of knowledge on the part of insurance agents
V13	Behavior of insurance agents was not satisfactory
V14	Linked hospitals are not easily accessible
V15	Difficulty in availing services in hospitals
V16	Narrow policy options
V17	More copayment involved
V18	More deductible applicable
V19	More hidden cost involved

Before the application of factor analysis the reliability of scale items were tested by applying cronbach's alpha. The value of all factors ranges between 0.81 to 0.91, indicating the presence of internal consistency. Further to test the sampling, Kaiser-Meyer-Olin measure of sampling adequacy is computed which is found to be 0.628. It indicates that sample is good enough for sampling. Moreover the overall significance of correlation matrices has been tested with Bartlett Test (approx. Chi-square = 4236.391and significant at 0.000) at 171 degree of freedom which provided as well as support for the validity of data for factor analysis.

All this provided that we can proceed with factor analysis and the result of factor analysis over 19 factors shown that there are 7 key factors, which was determined by clubbing the similar variables and ignoring the rest, which majorly consider being most affecting barriers in the subscription of health insurance. The table 4 shows the respective percentage of variance of all these factors derived from factor analysis.

Table 4 shows the total variance explained by various factors

.	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.026	26.453	26.453	5.026	26.453	26.453	2.901	**15.269**	15.269
2	2.549	13.418	39.871	2.549	13.418	39.871	2.674	**14.074**	29.343
3	1.742	9.167	49.039	1.742	9.167	49.039	2.078	**10.938**	40.281
4	1.535	8.079	57.118	1.535	8.079	57.118	1.988	**10.464**	50.744
5	1.307	6.881	63.999	1.307	6.881	63.999	1.734	**9.129**	59.873
6	1.207	6.352	70.351	1.207	6.352	70.351	1.601	**8.428**	68.301
7	1.112	5.851	76.201	1.112	5.851	76.201	1.501	**7.900**	**76.201**
8	.816	4.293	80.494						
9	.717	3.773	84.267						
10	.576	3.033	87.300						
11	.446	2.346	89.646						
12	.422	2.219	91.865						
13	.347	1.826	93.692						
14	.305	1.607	95.299						
15	.261	1.376	96.675						
16	.213	1.120	97.795						
17	.185	.974	98.769						
18	.129	.680	99.449						
19	.105	.551	100.000						

Extraction Method: Principal Component Analysis.

It is observed from table 4 that only 7 factors has Eigen value more than one, so accordingly we preceded with these factors. The total variance explained by factor 1, 2, 3,4,5,6 and 7 is 15.269, 13.074, 10.938, 10.464, 9.129, 8.428 and 7.900 percent of variance, whereas the cumulative variance explained by all these factors is 76.201 percent and rest of the variance is due to the factors which are beyond the scope of the study.

Table 5 shows the Rotated Component Matrix

	Component						
	1	2	3	4	5	6	7
V1	**.559**	.341	-.196	.278	-.149	.010	-.006
V2	.456	**.669**	.062	.232	-.029	-.050	-.191
V3	.231	**.620**	.096	.113	.256	-.426	-.081
V4	.499	.292	.036	-.156	.132	.109	**.589**
V5	.005	**.805**	.137	.049	.161	.022	.093
V6	.021	**.753**	.218	.014	.099	.186	.411
V7	.156	-.025	.116	.349	-.028	-.294	**.704**
V8	.097	.253	-.261	.402	.305	.415	**.487**
V9	.174	.186	.051	**.815**	.085	-.036	-.030
V10	-.024	-.007	.152	**.771**	.035	.195	.231
V11	-.136	.221	**.677**	.314	-.226	.156	.005
V12	.026	.063	**.881**	.021	-.010	-.036	.133
V13	-.160	.239	**.699**	-.006	.521	-.033	-.168
V14	.441	-.029	.285	.368	**.664**	.030	.031
V15	.060	.308	-.186	-.010	**.823**	.175	.128
V16	.122	-.081	.089	.093	.134	**.842**	-.120
V17	**.568**	.283	-.032	.166	.036	.520	.102
V18	**.849**	.143	-.033	-.025	.137	.171	.046
V19	**.845**	-.118	-.052	.061	.112	-.072	.237

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a Rotatin converged in 17 iterations.

The table 5 shows that each statement corresponding to the highlighted factor loading is correlated with the factor corresponding to that factor loading. Higher the factor loading, stronger is the correlation between the factors and statement. On the basis of rotated component matrix the factor extraction table has been prepared which is as:

Table 6 Is Factor Extraction Table which is shows the variables in each factor with corresponding loading and percentage of variance:

Factors	% of Variance	Factor Interpretation	Variables Included in the factor	Loading
F1	15.269	Lack of Funds to Meet Costly Affair	▪ Low salary/non availability of funds (V1) ▪ More copayment involved (V17) ▪ More deductible applicable (V18) ▪ More hidden cost involved (V19)	.559 .568 .849 .845
F2	14.074	Lack of Awareness and Willingness to Join	▪ Don't like to buy (V2) ▪ Don't feel the need for it (V3) ▪ Unaware about it (V5) ▪ No one suggested about it (V6)	.669 .620 .805 .753
F3	10.938	Lack of Intermediaries' Outreach and Capabilities	▪ Difficulty to approach insurance agents (V11) ▪ Inadequacy of knowledge on the part of insurance agents (V12) ▪ Behavior of insurance agents was not satisfactory (V13)	.677 .881 .699
F4	10.464	Lack of Reliability and Comprehensive Coverage	▪ Lack of comprehensive coverage (V9) ▪ Lack of reliability and flexibility (V10)	.815 .771
F5	9.129	Lack of Availability and Accessibility of Services	▪ Linked hospitals are not easily accessible (V14) ▪ Difficulty in availing services in hospitals (V15)	.664 .823
F6	8.428	Narrow Policy Options	▪ Narrow policy options	.842
F7	7.900	Prefer Other Mode to Invest (followed by friends, relatives etc)	▪ Prefer to invest money in some other areas (V4) ▪ Not taken by friends, relatives etc (V7) ▪ Saving in some other areas to meet health care needs V8	.589 .704 .487

The above stated factors are in the order of degree of importance i.e. factor 1 is more important than factor 2; factor 2 is more important than factor 3 and so on. The factor 1 and 2 has 15.269%, and 14.074 of variance which is the highest variance as compared with factor 3, 4, 5, 6 and 7 where % of variance is 10.938, 10.464, 9.129, 8.428 and 7.900. Hence it is found that 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) are acting as main barriers in the subscription of health insurance.

5.3 Willingness to join and pay health insurance by non health insurance policy holders: Further the analysis of non health insurance policy holders has been made in order to know about their willingness to join and pay for health insurance. For this respondents were asked to give answer for followings: ready to buy; still need some time; not ready to buy; no response or buy if certain conditions fulfilled. As far as conditional buying of health insurance is concerned, the respondents were asked to rank the conditions in the order of priority by assigning 1 to most prefer and 5 to least prefer condition for the buying of health insurance policy.

Table 7 shows the willingness level of non health insurance policy holders and weighted average scores of various conditions

Particulars	**Frequency**	**Percentage**
Ready to buy	54	11.9
Not ready to buy	139	30.6
No response	105	23.1
Still need some time	66	14.6
Buy if conditions fulfilled	90	19.8
Total	454	100
Conditions to buy	**WAS**	**Rank**
If comprehensive coverage provided with least cost	3.36	1
If some contribution will employer made	3.14	2
If available with least formalities	3.04	3
If friends and relatives buy	2.78	4
If someone suggest about it	2.68	5

It is clear from the table 7 that 30.6%, 23.1% and 14.6% of non health insurance policy holders are not ready to buy, not provided any response and still need sometime. Whereas a very few percentage i.e. 11.9% are ready to buy health insurance without any conditions and remaining are willing to buy only if certain conditions will fulfill. As far as ranking of conditions of buying are concerned, 1 rank is assigned to "if comprehensive coverage provided with least cost" as its weighted average score is 3.36 is more as compared with all other conditions. Whereas 2 rank is assigned to "if some contribution will employer made", followed by "If available with least formalities", "If friends and relatives buy", "If someone suggest about it".

5.4 Thereafter hypothesis were tested with the help of chi-square: The use of chi-square was made in order to find out the association between the variables associated with the individual having impact on their ability and willingness to pay for health insurance.

Table 8 show the results of Chi-Square and Symmetric Measure

		Value	df	Sign.	Significant/ Insignificant	Accepted/ Rejected
$\mathbf{H_o}$	Pearson Chi-Square	10.675	1	.001	Significant	Rejected
	Likelihood Ratio	12.214	1	.000		
	Linear-by-Linear Association	10.656	1	.001		
	Cramer V	.138		.001		
	Contingency coefficient	.136		.001		
$\mathbf{H_{o1}}$	Pearson Chi-Square	42.113	3	.000	Significant	Rejected
	Likelihood Ratio	39.885	3	.000		
	Linear-by-Linear Association	30.794	1	.000		
	Cramer V	.273		.000		
	Contingency coefficient	.264		.000		
$\mathbf{H_{o2}}$	Pearson Chi-Square	.187	1	.666	Insignificant	Accepted
	Likelihood Ratio	.188	1	.665		
	Linear-by-Linear Association	.187	1	.666		
	Cramer V	.018		.666		
	Contingency coefficient	.018		.666		
$\mathbf{H_{o3}}$	Pearson Chi-Square	38.094	8	.000	Significant	Rejected
	Likelihood Ratio	54.126	8	.000		
	Linear-by-Linear Association	7.344	1	.007		
	Cramer V	.260		.000		
	Contingency coefficient	.252		.000		
$\mathbf{H_{o4}}$	Pearson Chi-Square	192.071	7	.000	Significant	Rejected
	Likelihood Ratio	210.480	7	.000		
	Linear-by-Linear Association	45.931	1	.000		
	Cramer V	.584		.000		
	Contingency coefficient	.504		.000		
$\mathbf{H_{o5}}$	Pearson Chi-Square	12.445	4	.014	Significant	Rejected
	Likelihood Ratio	12.083	4	.017		
	Linear-by-Linear Association	5.955	1	.015		
	Cramer V	.149		.014		
	Contingency coefficient	.147		.014		

* Significant at the 0.05 level.

For the rejection of null hypothesis it is required that p value should be less than 0.05. The table 8 shows that the value of p is 0.001 which signifies that the results are insignificant at 5% level of significance. Moreover the value of Pearson Chi-square 10.675 which is more than the tabulated value of 7.87944 for 1 degree of freedom. This leads to the rejection of null hypothesis($\mathbf{H_o}$) which state that there is no significant association between the gender of respondents and their willingness to pay for health insurance. In other words willingness to pay for health insurance is associated with the gender of the individuals. Further the symmetric measure of association has also shown although there is association but it is not strong. The value of Chi-Square among willingness to pay and age of the respondents is 42.113 which are more than the tabulated value of 12.8381 for 3 degree of freedom at 5% level of significance. This leads to the rejection of null hypothesis($\mathbf{H_{o1}}$) which state that there is no significant association between the age of respondents and their willingness to pay for health insurance. Thereby the result of chi-square has provided us with the fact that association exist between these two. Besides this the result of symmetric measure has provided with the fact that although there is association yet it is not strong as the value of Cramer V and Contingency coefficient is 0.273 and 0.264.

The value of Chi-Square among willingness to pay and marital status of the respondents is 0.187 which is less than the tabulated value of 7.87944 for 1 degree of freedom at 5% level of significance. This leads to the acceptance of null hypothesis($\mathbf{H_{o2}}$) which state that there is no significant association between the marital status of respondents and their willingness to pay for health insurance. Thereby the result of chi-square has provided us with the fact that no association exist between willingness to pay and marital status of the respondents. The value of Chi-Square among willingness to pay and education level of the respondents is 38.094 which are more than the tabulated value of 21.9550 for 8 degree of freedom at 5% level of significance. This leads to the rejection of null hypothesis($\mathbf{H_{o3}}$) which state that there is no significant association between the education level and their willingness to pay for health insurance. In other words significant association exists between these two. Besides this the result of symmetric measure has provided with the fact that although there is association yet it is not strong as the value of Cramer V and Contingency coefficient is 0.260 and 0.252. The value of Chi-Square among willingness to pay and occupation of the respondents is 192.071 which are more than the tabulated value of 20.2777 for 7 degree of freedom at 5% level of significance.

This leads to the rejection of null hypothesis($\mathbf{H_{04}}$) which state there is no significant association between the occupation of respondents and their willingness to pay for health insurance. Thereby the result of chi-square has provided us with the fact that association exist between these two. Besides this the result of symmetric measure has provided with the fact that association is strong as the value of Cramer V and Contingency coefficient is 0.584 and 0.504 which is more than 0.5. The value of Chi-Square among willingness to pay and income of the respondents is 12.445 which are more than the tabulated value for 4 degree of freedom at 5% level of significance. This leads to the rejection of null hypothesis($\mathbf{H_{05}}$) which state that there is no significant association between the income of respondents and their willingness to pay for health insurance. Thereby the result of chi-square has provided us with the fact that association exist between these two. In other words association exists between the income of the respondents and their willingness to pay for health insurance. Besides this the result of symmetric measure has provided that although there is association yet it is not strong as the value of Cramer V and Contingency coefficient is 0.149 and 0.147.

6. Conclusion

Although the health insurance is not a new concept and the people are also getting aware about it, which mainly comes from TV followed by newspaper, agents, friends etc, but this awareness has not yet reached the level of subscription. As the results shown that just 19.4% are being covered by some form of health insurance and large chunk of the population is still financing health care expenditure without health insurance. Moreover it was observed that there are 7 key factors by clubbing the related variables under it which are acting as barrier in the subscription of health insurance. These are 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). Alternatively, the analysis of willingness to join and pay for health insurance has been made to know whether non health insurance policyholders are ready to buy it or not and the results provided that very few percentage i.e. 11.9% are ready to buy health insurance without any conditions and 19.8% are willing to buy only if certain conditions will fulfill. Remaining is not ready to buy, still need some time or not provided with any response. As far as the ranking of conditions of buying are concerned, 1 rank is assigned to "if comprehensive coverage provided with least cost" as its weighted average score is 3.36 is more as compared with all other conditions. Whereas 2 rank is assigned to "if some contribution will employer made", followed by "If available with least formalities", "If friends and relatives buy", "If someone suggest about it". Besides this the association between the various variables linked with the respondents has been determined with their willingness to pay for health insurance and the results provided that on the one hand significant association exist between the gender; age; education; occupation; income of respondents with their willingness to pay for health insurance. On the other hand no significant association exists between the marital status of the respondents with their willingness to pay for health insurance.

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