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# A study of factor affecting the demand for health insurance in punjab

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**ABSTRACT:** The economic status of a country is directly related to the health status of its people. Good health is one of the most important pre-requisite to human productivity which in turn leads to overall development of a society. Health is understood as the indispensable basis for defining a person‟s sense of well-being. It is an important resource for a nation to pursue national development goals. It raises the productivity of the labor force and enhances economic growth. It plays a critical role in supplementing government effort in ensuring the availability and accessibility of health care services to the population. The objective of the present paper is to know the awareness of health insurance and the factors affecting the demand for health insurance in Punjab. For the analysis of data descriptive statistics and factor analysis have been applied. The sample size is 200 residents of Jalandhar chosen according to convenience approach. The study highlighted that majority of the people aware of the health insurance, Only 11.5 % of the total sample has subscribed for health insurance scheme and five factors i.e. formalities bottlenecks, agent related problems, coverage issues, awareness, negative feedback are main barriers in the success of health insurance in Punjab.

***Keywords:*** *Awareness;Coverage Issues; Formalities Bottleneck; , Health Insurance; Negative Feedback.*

## INTRODUCTION

Human resources are the real wealth of nation. An increase in national income does not always lead to human welfare. Economic development coupled with human development should be the primary goal of a nation. Though India is one of the fastest growing economies with expected growth rate in 2012-2013 is 7.5, +/-0.25, despite high growth rate, its rank is 134 on Human development index (HDI). The HDI provides a composite measure of three dimensions of human development: living a long and healthy life, being educated and having a decent standard of living .Total public expenditure on health in the country as percentage of GDP now stands at around 1.1 per cent. However, health related expenditure like clean drinking water, sanitation, and nutrition has a major bearing on health and if expenditure on these is counted the total public health spending reaches around 2.5 per cent of GDP. Even so, it is strongly felt that public expenditure on health needs to be increased. On the other hand, the country is gripped with communicable and non-communicable diseases resulting of changing of life styles, while on the other hand, health care costs are escalating making access to quality health care difficult (Bharati, 2011). Ill health not only leads to financial bankruptcy but also gives a lot of suffering to the affected individual and also his/her family. A suitable coverage by way of health insurance is all that is required to cope up with such situations. It would be an arrangement that helps to defer, delay, reduce or altogether avoid payment for health care incurred by individuals and households. Health care is always been a problem area for India, a nation with a large population and large percentage of population living in urban slums and rural areas, below the poverty line. Before independence the health structure was in dismal condition, since independence emphasis has been put

on primary health care and we have made considerable progress in improving the health status of the country, given the situation, there are few issues of concern or barriers towards the implication of health insurance schemes in India (Sahoo and Das).

**REVIEW OF LITERATURE**

Aust. J. (2002) found that 75% of health resources and health infrastructure is concentrated in urban area where only 27% of the population lives. The problem of rural health is to be addressed both at macro and micro level. A paradigm shift from the current biomedical model to socio culture model is required. There is a current need of a health policy which will address the existing inequalities and work in promoting long term perspective plan for rural health. Ghuman and Mehta (2005) explains the two important factors that cause a poor health status in Punjab, one factor is ignorance among the free treatment in the government hospitals second is cumbersome procedure for getting and renewing of the yellow cards are constraining the access of the poor to public health care services and emphasized the role of health insurance in meeting the health care needs in the state. Bhat and Jain (2006) highlighted the factor affecting the demand for health insurance in a micro insurance .The demand for health insurance has been analyzed at two levels. First the factor affecting the decision to purchase health insurance and second factors that determine the coverage of health insurance, Income, age, knowledge about insurance, perception regarding future healthcare expenditure and no. of children in a family are the factors which were found to affect eh purchase of health insurance scheme. Siddhartha (2007) examined several health insurance schemes with regard to extending health insurance coverage to poor house hold and those working in informal sectors. He has compared various existing schemes on no. of parameters like coverage provided, annual subscription fee, no. of members etc. According to him community based health insurance is more useful but there is need for special approach for people below the poverty line. Chandhok (2009) highlighted the role of MFI"s in giving protection to the poor against various risks like life, illness, death and health etc, the micro insurance can eradicate poverty and can lead to development of the country. Through her study she founded that people become conscious about the health insurance in age of 41 – 50 years. Kundu Soma (2009) through his journal has tried to explore the different financial avenues that are available to the patients for meeting their healthcare expenditure. But because of increase in healthcare expenses, healthcare treatment is becoming unaffordable for poor. With the increase in the demand of healthcare services from the low income group, health insurance can prove to be efficient tool for financing healthcare in a county. Bawa and Ruchita (2011) have concluded the presence of seven key factors which are acting as barriers to subscription to health insurance. These were lack of funds, lack of willingness and awareness, lack of intermediaries, lack of reliability and lack of accessibility to services. Also they have concluded that significant relationship exists between age, gender, education, occupation and income of the respondents and their willingness to pay for health insurance while no significant relationship was found between marital status and their willingness to pay for health insurance.

**SCOPE OF STUDY**

The study will be confined to Jalandhar and it will be conducted on a sample of 200 residents over a period of six months in between from 2011-2012.

**OBJECTIVES OF STUDY**

- To know the awareness of health insurance in the sampled area.
- To study the factors affecting the demand for health insurance.

**RESEARCH HYPOTHESIS**

**$H_{01}$:** There is no association between the age of respondents and awareness of health insurance.

**$H_{02}$:** There is no association between the gender of the respondents and awareness of health insurance.

## RESEARCH METHODOLOGY

In the present paper descriptive research design has been applied. The data was collection structured questionnaire was formed on the issues relevant to the research objective .The sample size is 200 respondents and convenience sampling technique has been used. For the analysis of data descriptive statistics, factor analysis and chi-square have been applied.

## ANALYSIS AND INTERPRETATION

### *i. Demographic profile of respondents.*

Following table shows the demographic profile of the respondents. It includes Gender, Age, Marital Status, Education Level, Occupation and annual income of the respondents along with frequency and their percentage out of 200 respondents.

**Table 1: Personal Profile of the Respondents**

| Gender | Frequency | Percentage |
|---|---|---|
| Male | 147 | 73.5 |
| Female | 53 | 26.5 |
| **Age** | | |
| Below 25 | 37 | 18.5 |
| 25-35 | 77 | 38.5 |
| 35-45 | 49 | 24.5 |
| 45-55 | 20 | 10 |
| 55 above | 17 | 8.5 |
| **Material status** | | |
| Single | 57 | 28.5 |
| Married | 143 | 71.5 |
| **Education Level** | | |
| Matric | 8 | 4 |
| SSC | 8 | 4 |
| Graduation | 86 | 43 |
| Post-Graduation | 93 | 46.5 |
| Phd. | 5 | 2.5 |
| **Occupation** | | |
| Employed | 97 | 48.5 |
| Self-employed | 25 | 12.5 |
| Housewife | 8 | 4 |
| Unemployed | 32 | 16 |
| Professional | 21 | 10.5 |
| Family owned business | 17 | 8.5 |
| **Annual Income (Rs.)** | | |
| Less than 1,00,000 | 45 | 22.5 |
| 1,00,000-3,00,000 | 64 | 32 |
| 3,00,000-5,00,000 | 66 | 33 |
| Above 5,00,000 | 25 | 12.5 |

From the data shown in table 1 we can examine that 73.5% of the total sample was male and rest 26.7% were female.It can be observed from the data that highest percentage of respondent"s i.e. 46% respondents were post-graduate, followed by 43 percent graduate. As far as level of income is concerned a major portion have income between Rs. 3,00,000 – Rs. 5,00,000 followed by income between Rs. 1,00,000 – Rs. 3,00,000.

***ii.*** ***Awareness, Exposure, and knowledge of Respondent 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: Awareness Level and Sources of Awareness for Health Insurance**

| | Particulars | Frequency | Percentage |
|---|---|---|---|
| Awareness about health insurance | Not aware | 31 | 15.5 |
| | Aware but not subscribed | 146 | 73 |
| | Aware and subscribed | 23 | 11.5 |
| Sources of Awareness | Newspaper | 64 | 32 |
| | Radio | 25 | 12.5 |
| | TV | 42 | 21 |
| | Internet | 9 | 4.5 |
| | Agents | 19 | 9.5 |
| | Family | 1 | .5 |
| | Friends | 8 | 4 |
| | Doctor | 2 | 1 |

The above table shows the various sources of awareness and its significant effect on the people. It is clear from the table 2 that people had already heard about health insurance yet a significant portion of the respondent i.e. 73% are still without any form of health insurance. Moreover there are number of sources creating awareness about health insurance. Mainly the source of awareness is newspaper followed by TV and Radio, Agents etc.

***iii.*** ***Factor Affecting Demand for Health Insurance:*** There are numerous reasons for not having health insurance i.e. there are number of factors which act as barrier in the subscription of health insurance. All these reasons were taken in the form of variables and respondent who are without health insurance were ask to give their response on five point likert scale ranging from strongly agree to strongly disagree. Where 1 signifies strongly agree, 2 signifies agree, 3 signifies neutral, 4 signifies not agree, 5 signifies strongly disagree. Thereafter factor analysis was done in order to reduce the variables. All these factors along with their description are shown in table 3.

**Table 3: List of Variables Along with their Description**

| Variable | Description |
|---|---|
| V1 | Not aware about it |
| V2 | Investing money in other area is better |
| V3 | Lack of comprehensive coverage |
| V4 | Hidden cost is involved |
| V5 | Complex process for claims |
| V6 | Difficult to approach insurance agent |
| V7 | Insurance agents are not well aware of polices |
| V8 | Behaviour of insurance agent was not satisfactory |
| V9 | No one told me to buy it. |
| V10 | More deductible applicable |
| V11 | Negative feedback about health insurance claim process |
| V12 | If some contribution will be employer made |
| V13 | If available with least formalities |
| V14 | All disease are not covered |
| V15 | All hospitals are not covered |

Before the application of factor analysis the reliability of scale items were tested by applying cronbach"s alpha. The value came out to be .794, which states that scale is reliable and appropriate. Further to test the sampling, Kaiser-Meyer-Olin measure of sampling adequacy is computed which is found to be 0.660. 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 = 983.204 and significant at 0.000) at 136 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 15 factors shown that there are 5 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: The Total Variance Explained by Various Factors**

**Total Variance Explained**

| Component | 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 | 4.007 | 26.716 | 26.716 | 4.007 | 26.716 | 26.716 | 2.518 | 16.787 | 16.787 |
| 2 | 2.052 | 13.679 | 40.395 | 2.052 | 13.679 | 40.395 | 2.130 | 14.200 | 30.986 |
| 3 | 1.634 | 10.893 | 51.288 | 1.634 | 10.893 | 51.288 | 1.874 | 12.492 | 43.478 |
| 4 | 1.250 | 8.333 | 59.621 | 1.250 | 8.333 | 59.621 | 1.769 | 11.790 | 55.268 |
| 5 | 1.056 | 7.037 | 66.658 | 1.056 | 7.037 | 66.658 | 1.708 | 11.390 | 66.658 |
| 6 | .971 | 6.473 | 73.131 | | | | | | |
| 7 | .688 | 4.588 | 77.719 | | | | | | |
| 8 | .630 | 4.202 | 81.921 | | | | | | |
| 9 | .571 | 3.806 | 85.727 | | | | | | |
| 10 | .548 | 3.651 | 89.378 | | | | | | |
| 11 | .471 | 3.143 | 92.521 | | | | | | |
| 12 | .388 | 2.585 | 95.106 | | | | | | |
| 13 | .342 | 2.279 | 97.385 | | | | | | |
| 14 | .228 | 1.518 | 98.903 | | | | | | |
| 15 | .165 | 1.097 | 100.000 | | | | | | |

Extraction Method: Principal Component Analysis.

We can observe from the table 4 that only 5 factors are there which have Eigen value more than 1 and the variance explained by these 5 factors is 26.716%, 13.679%, 10.893%, 8.333% 7.037% respectively and cumulative variance explained by all these six factors is 66.658%. Rest of the variance is due to other factors which are beyond the scope of study.

**Table 5: The Rotated Component Matrix of Factor Analysis**

| | Component | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| Not aware about it | .245 | -.085 | -.125 | **.796** | .044 |
| Investing money in other area is better | **.649** | -.092 | .045 | -.423 | .075 |
| Lack of comprehensive coverage | **.763** | .251 | .033 | .040 | .054 |
| Hidden cost is involved | **.736** | .105 | .238 | .073 | .107 |
| Complex process for claims | **.614** | .245 | .223 | .023 | .295 |
| Difficult to approach insurance agent | .048 | **.755** | -.003 | .289 | .381 |
| Insurance agents aren not well aware of polices | .158 | **.684** | .173 | -.300 | .053 |
| Behaviour of insurance agent was not satisfactory | .182 | **.790** | .169 | -.195 | -.197 |
| No one told me to buy it | -.315 | -.146 | .010 | **.769** | -.048 |
| More deductible applicable | .181 | .048 | .083 | .310 | **.684** |
| Negative feedback about health insurance claim process | .020 | .117 | .153 | -.175 | **.815** |
| If some contribution will be made by employer | .256 | -.109 | .015 | -.081 | .345 |
| If available with least formalities | .464 | -.403 | .430 | .043 | .346 |
| All disease are not covered | .122 | .031 | **.897** | -.078 | .201 |
| All hospitals are not covered | .214 | .325 | **.819** | -.066 | .003 |

*Extraction Method: Principal Component Analysis.*
*Rotation Method: Varimax with Kaiser Normalization.*

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: Factors Extracted Percentage of Variance and Loading on the Variables**

| Factor | % Variance | Factor Interpretation | Variables included in the factors | Loading |
|---|---|---|---|---|
| **F1** | **23.933** | **FORMALITY BOTTELNECK** | Investing money in other area is better | **.649** |
| | | | Lack of comprehensive coverage | **.763** |
| | | | Hidden cost is involved | **.736** |
| | | | Complex process for claims | **.614** |
| **F2** | **12.477** | **AGENT RELATED PROBLEM** | Difficult to approach insurance agent | **.755** |
| | | | Insurance agents are not well aware of polices | **.684** |
| | | | Behaviour of insurance agent was not satisfactory | **.790** |
| **F3** | **9.889** | **COVERAGE ISSUES** | All disease are not covered | **.897** |
| | | | All hospitals are not covered | **.819** |
| **F4** | **9.217** | **LACK OF AWARENESS** | Not aware about it | **.796** |
| | | | No one told me to buy it. | **.769** |
| **F5** | **6.861** | **NEGATIVE FEEDBACK** | More deductible applicable | **.684** |
| | | | Negative feedback about health insurance claim process | **.815** |

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 has 26.716% of variance which is the

highest variance as compared with factor 2, 3, 4, and 5 where % of variance is 13.679, 10.893, 8.333, 7.0737 respectively. From above we can conclude that Formalities bottlenecks, Agent related problems, Coverage Issues, Awareness, Negative feedback are main barriers in the health insurance.

***iv. Association between Age and Awareness of Health Insurance.***

In this test, an attempt is made by applying cross tabulation test to check that is there any relation between Age of the respondent and Awareness about health insurance. Following hypothesis was taken:

$H_0$: There is no association between Age and Awareness of health insurance.

**Table 7: Relationship between Age and Awareness level**
**(Chi-Square Tests)**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 2.758[a] | 4 | .599 |
| Likelihood Ratio | 3.138 | 4 | .535 |
| Linear-by-Linear Association | 2.721 | 1 | .099 |
| N of Valid Cases | 200 | | |

*a. 4 cells (40.0%) have expected count less than 5. The minimum expected count is .16.*

From the above results of Chi-Square test, we can see that value of Pearson Chi-Square is coming out to be .599 which is greater than 0.05, which mean that null hypothesis is accepted i.e. there is no significant relationship between Age and Awareness about health insurance.

**4.2 *Association between Gender and Awareness about health insurance***

In this test, an attempt is made by applying cross tabulation test to check that is there any relation between Gender of the respondent and Awareness about health insurance. Following hypothesis was taken:

$H_0$: There is no association between Gender and Awareness of health insurance.

**Table 8: Relationship between Gender and Awareness Level**
**(Cross tabulation test results)**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 2.026[a] | 1 | .155 |
| Continuity Correction[b] | 1.445 | 1 | .229 |
| Likelihood Ratio | 2.208 | 1 | .137 |
| Fisher's Exact Test | | | |
| Linear-by-Linear Association | 2.016 | 1 | .156 |
| N of Valid Cases[b] | 200 | | |

*b.* Computed only for a 2x2 table

From the above results of Chi-Square test, we can see that value of Pearson Chi-Square is coming out to be .155 which is greater than 0.05, which mean that null hypothesis is accepted i.e. there is no significant relationship between Gender and Awareness about health insurance.

## FINDINGS

- Five Factors i.e. Formalities bottlenecks, Agent related problems, Coverage Issues, Awareness, and Negative feedback are main barriers in the health insurance.
- Only 11.5 of the total sample has subscribed for health insurance scheme.
- There is no significance relation between Age and Awareness about health insurance.
- There is no significance relation between Gender and Awareness about health insurance.

## LIMITATIONS OF THE STUDY

- Due to time constraints, limited numbers of respondents were catered.
- The survey was concluded on a specific region of Jalandhar only .

## CONCLUSION

Although the health insurance is not a new concept and the people are also getting aware about it, which mainly comes from newspaper followed by radio, TV, agents etc, but this awareness has not yet reached the level of subscription. As the results shown that just 11.5% 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 5 key factors by clubbing the related variables under it which are acting as barrier in the subscription of health insurance. These are Formalities bottleneck, Agent related problem, coverage Issues, Awareness, Negative feedback. Besides this the association between the various variables linked with the respondents has been determined with awareness about health insurance and the results proved that there was no significant relationship between age, gender and awareness about health insurance.

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