

# Exploring factors of low health insurance penetration among Indian Muslims

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## Abstract

**Objectives:** This study explores the demographic and socio-economic factors leading to low penetration of health insurance among Indian Muslims with special reference to Allahabad.

**Methods/Statistical analysis:** Stratified random sampling was used and responses were collected using Likert scale in questionnaire from urban, semi-urban and rural areas. Descriptive analysis, reliability analysis and exploratory factor analysis were done for all the attributes of the questionnaire. To assess whether the analyzed factors are related to the buying intentions of the prospective customers or not, we have calculated chi square. Pearson correlation coefficients have been calculated to analyze the degree of correlation.

**Findings:** Our study finds that young educated Muslims are willing to buy health insurance policy. Employment sector, income and status of employment are all important factors. The service class Muslims especially in government sector is interested to buy the health insurance. Location of residence/ work place is also important factor, as per our study urban people are more aware about health insurance as compare to semi-urban or rural people. As per our study, religious practices are also a deterrent in buying health insurance but increasing education in Muslims is reversing it. Because of low education and awareness, most of the Muslims don't trust whether that they will get claim benefits or not. Insurers should run special awareness campaign among Muslim areas. Respondents expect claim process and policy conditions to be further simplified. Network of empanelled hospitals does not include Muslim locality hospitals which is again a deterrent.

**Application/Improvements:** To increase penetration, health insurance companies should increase awareness campaign, should further simplify claim process, empanel more local hospitals and appoint agents/ brokers among Muslims localities.

**Keywords:** Health insurance, Penetration, Descriptive statistics, Muslims, India.

## 1. Introduction

Health Insurance Act comes under the Insurances act 1938; section '(6C) "health insurance business" means the effecting of contracts which provide for sickness benefits or medical, surgical or hospital expense benefits, whether in-patient or out-patient travel cover and personal accident cover. Good health is a boon for human life. The increasing cost of medical expenses is beyond the financial capability of common man. Medical care has always been a problem area for India as larger percentage of her population living in urban slums and in rural area and that too below the poverty line. Government of India and people has started exploring various avenues to meet out health expenses e.g. financing options etc. The term health insurances relates to types of insurances that are against the risk of incurring medical expenses. Health insurance is a contract between insurer and an individual to provide risk cover against specific diseases at agreed upon premium. Health insurance plans are available from a meagre sum assured of ₹5000 in micro insurance plans to even a large sum assured of ₹50 lakhs or more in certain critical illnesses. Most insurers offer plans between 1 lakh to 5 lakh sum assured.

Non-life insurers offer health insurance plans for a term of one year, two, three, four and five years. Life insurers offer plans which have even longer term. Section 80(D) of Income Tax Act provides deduction of the premium paid towards payment of health plan health insurance plans. Health insurance policyholders can avail of an annual deduction of ₹25,000 from their taxable income for payment of Health Insurance premium for self, spouse and dependent children from financial year 2018-19. Health insurance was introduced in India in 1986.

This sector has grown significantly because of liberalization of economy, increase in per capita income of Indians and general awareness. Still Indian Muslims have less or no awareness about it. World Bank report 2010 states that more than 25% of India's population had access to some form of health insurance. There are public sector undertaking health insurance companies and private health insurance companies operating in India. To improve the awareness and to reduce the myths regarding health insurance plans, the General Insurance Corporation (GIC) of India and the Insurance Regulatory and Development Authority (IRDA) launched an awareness campaign for all segments of the society pan India.

Health insurance plans in India mainly pays for only inpatient hospitalization and for treatment at hospitals in India. The first health plan in India was Mediclaim. Government of India liberalized insurance industry in year 2000 and allowed private insurers into the insurance sector. Outpatient services which were not payable under health policies in India were offered after liberalization. Private insurers in India introduced many innovative products like family floater plans, top-up plans, critical illness plans, hospital cash and top up policies. Presently, Health insurance plans in India can be broadly classified into following categories:

1. Hospitalization Care
2. Family Floater Health Insurance
3. Pre-Existing Disease Cover Plans
4. Senior Citizen Health Insurance
5. Maternity Health Insurance
6. Hospital daily cash benefit plans
7. Critical illness plans
8. Proactive plans
9. Disease specific special plans[1]

## 2. Significance

1. There is a need to make people aware about health insurance concept and plans and also to help them in optimizing their decisions for particular situations which arises post occurrence of disease.
2. Health insurance is a complicated financial instrument. Educating people especially Muslims about health insurance is need of the hour as critical diseases drain out all their money.
3. Health insurance provides financial protection against diseases. Indian Muslim is devoid of its benefits because of certain factors.

## 3. Objectives

1. To study the demographic factors affecting health insurance penetration in Indian Muslims.
2. To study the socio-economic factors affecting health insurance penetration in Indian Muslims.

## 4. Literature survey

In [2] found that there are presently challenges in public as well as in private insurance sector in India in terms of monitoring, data capturing, administration and oversight. They stressed on the financial sustainability of the insurance programme and develop early warning systems for identification of the signs of collapse. In [3] found that to increase health insurance penetration, a mix of government insurance schemes and insurance company's schemes must be used. Product innovation is also a key driver to increase it. In [4] found many challenges in health care equity in India. Inequalities are because of socio-economic status, geography and gender. This situation is worsened by high out of pocket expenses in meeting our daily needs, inflation in health expenditure and behavioral factors. In [5] found that well designed CHI schemes can improve health care even for vulnerable sections of the community e.g. the poor, the individuals with preexisting diseases like diabetes, hypertension and pregnant woman. In Islam, there is respect for private property rights which are an essential prerequisite for the *Shariah* law on an inheritance to be applied, and most Islamic economists view market as the normal vehicle for conducting business [6].

In [7] suggested that to increase penetration of health insurance there is need for better participation by central and state governments, corporate sector (insurance companies), Non-government organizations, public private partnership and role of academic and research institutions. Islam emphasizes the importance of "free" and "independent judgment" on the part of the customer. The ability to think rationally while making decisions relating to global marketing activities is a prerequisite in Islamic law [8].

## 5. Research methodology

### 1. Sample and data collection

The method used to collect data was through structured questionnaire, which included all questions required to conduct this research. Questionnaires were self-administered to minimize wastage. Muslim population of Allahabad district of India has been chosen for the collection of sample. As per census 2011, the population of Allahabad is 1.117 million, 20% of this population are Muslims. Sample size for this study at 95% confidence and 5% margin of error is coming out 384. Considering wrong responses and non-responses, we have taken 400 as our sample size for this study. The responses were obtained from various urban, semi-urban and rural Muslim localities of Allahabad. We have used simple stratified random sampling technique to include responses from various income groups. The survey was self-administered. Questionnaire was originally prepared in English language but as the respondents understand Hindi language therefore it was translated into Hindi and tested on a small group of 10 people to know whether they understand the questions or not. Finally after some modifications, questionnaire was used to collect responses from the respondents.

### 2. Measures

Respondents were encouraged and helped to answer the question in the best possible way. This study used 3 and 5-point Likert scale as per need [9].

## 6. Data analysis

### 1. Descriptive analysis results of survey and respondent's profile

A total of 400 questionnaires were self administered, 16 questionnaires were found incomplete and thus were rejected. Therefore, we analyzed a total of 384 questionnaires (adjusted response rate 96%). Following is the demographic profile of the respondents sample collected for this study as shown in Table 1.

### 2. Demographic profile of respondents

Table 1. Demographic profile of respondents

Demographic factors		Frequency	Percent
1. Gender	Male	370	96.4
	Female	14	3.6
	Total	384	100.0
2. Annual income (Rs)	Upto 1,00,000	7	1.8
	1,00,001-3,00,000	92	24.0
	3,00,001-5,00,000	21	5.5
	5,00,001-10,00,000	250	65.1
	Above 10,00,000	14	3.6
	Total	384	100.0
3. Age	18-25 years	9	2.3
	26-40	118	30.7
	41-55	197	51.3
	56-65	60	15.6
	Total	384	100.0
4. Highest education	Primary	35	9.1
	High School	87	22.7
	Senior Secondary	14	3.6
	Graduate	175	45.6

	Post graduate and above	73	19.0
	Total	384	100.0
5.Marital Status	Single	10	2.6
	Married	341	88.8
	Divorced	13	3.4
	Widowed	20	5.2
	Total	384	100.0
6.Location of residence	Urban	123	32.0
	Semi-urban	232	60.4
	Rural	29	7.6
	Total	384	100.0
7.Employment status	Employed full time	80	20.8
	Employed part time	115	29.9
	Self employed	174	45.3
	Retired	10	2.6
	Unemployed	5	1.3
	Total	384	100.0
8.Sector of employment	Agriculture	78	20.3
	Service	44	11.5
	Commercial	25	6.5
	Industrial	175	45.6
	Others	62	16.1
	Total	384	100.0
9.Annual income	Upto 1,00,000	7	1.8
	1,00,001-3,00,000	92	24.0
	3,00,001-5,00,000	21	5.5
	5,00,001-10,00,000	250	65.1
	Above 10,00,000	14	3.6
	Total	384	100.0

### 3. Reliability analysis results for all the attributes of the questionnaire

The internal consistency of all the items was assessed using Cronbach alpha. The Cronbach alpha for overall scale (nominal) was 0.953 (Table 2).

Table 2. Reliability statistics for all items in the instrument

Cronbach's Alpha	Number of Items
.953	14

### 4. Exploratory factor analysis

EFA is widely used statistical technique in social sciences. A total of 384 survey responses were analyzed in this section. Factor analysis was used to condense the information contained in these attributes and to confirm the notion that distinct dimensions existed. To assess the validity and reliability of each construct, factor analysis and reliability testing were used. The items in health insurance awareness (n=2), level of religiousness (n=5), distribution channel presence (n=5), doubt of not getting claim benefits (n=5), claim process tediousness (n=5), network of empanelled hospitals, difficult policy conditions (n=5) and fear of not able to pay future premiums (n=5) were subjected to factor analysis. To test the appropriateness of factor analysis, the overall measure of sampling adequacy was calculated (0.92) using the Kaiser-Meyer-Olkin index, which is meritorious [10]. In addition, the communalities of each variable ranged from 0.452 to 0.926, with an average value above 0.62, suggesting that the variance of the original values was somewhat explained by the common factors. Then, Bartlett's test of sphericity was conducted, which gave a significant Chi-square value to test the significance of the correlation matrix ( $\chi^2 = 3900.081$ ,  $df = 21$ , significance = 0.000). Both tests indicated that factor analysis was appropriate for this study [11].

## 5. Hypothesis testing

To assess whether the analyzed factors are related to the buying intentions of the prospective customers or not, we have calculated chi square. Pearson correlation coefficients have been calculated to analyze the degree of correlation as shown in Table 3.

Table 3. Chi-square test of independence and Correlation analysis of perceived factors in Allahabad

Variables	Pearsonchi – square( $x^2$ )	Df	Significance (p)	Pearson Correlation Sig (2 -tailed) with buying
Demographic:				
Age	286.269	6	0.000	0.660
Education	305.297	8	0.000	0.723
Income	390.824	8	0.000	0.772
Employment status	250.698	8	0.000	0.623
Sector of employment	310.398	8	0.000	0.739
Location of residence	288.520	4	0.000	0.611
Critical:				
Awareness	301.062	2	0.000	0.776
Islamic culture	438.509	6	0.000	0.855
Distribution channel	137.090	2	0.000	0.512
Benefit doubt	366.595	4	0.000	0.800
Claim process	624.353	8	0.000	0.918
Hospital network	478.863	8	0.000	0.837
Policy conditions	443.978	8	0.000	0.815
Fear of premium default	457.609	8	0.000	0.823

Note: Correlation is significant at the 0.01 level (2-tailed)

## 6. Demographical

H1: There is no relationship between the age of the prospect and the buying willingness.

After analyzing the chi-square test of independence between the variables age and buying willingness of the prospects, since the p-value is less than our chosen significance level i.e.  $\alpha = 0.05$ , we can reject the null hypothesis and conclude that there is an association between the age of the prospects and the health insurance buying willingness. Pearson Correlation coefficient is 0.660, that means age of prospects and buying intention is positively related i.e. as age increases, people show less willingness, the younger prospects up to 40 years of age are more willing to buy the health insurance plans as compare to the older one.

H2: There is no relationship between the education of the prospect and the buying willingness.

After analyzing the chi-square test of independence between the variables age and buying willingness of the prospects, since the p-value is less than our chosen significance level i.e.  $\alpha = 0.05$ , we can reject the null hypothesis and conclude that there is an association between the income of the prospects and the health insurance buying willingness. Pearson Correlation coefficient is 0.723, that means education of prospects and buying intention is highly positively related i.e. as education decreases, people show less willingness, the prospects with higher education (graduate and above) are more willing to buy the health insurance plans as compare to the less educated group.

H3: There is no relationship between the income of the prospect and the buying willingness.

After analyzing the chi-square test of independence between the variables age and buying willingness of the prospects, since the p-value is less than our chosen significance level i.e.  $\alpha = 0.05$ , we can reject the null hypothesis and conclude that there is an association between the income of the prospects and the health insurance buying willingness. Pearson Correlation coefficient is 0.772, that means income of prospects and buying intention is highly positively related i.e. as income decreases, people show less willingness, the prospects in the higher income group are more willing to buy the health insurance plans as compare to the lower income group.

H4: There is no relationship between the employment status of the prospect and the buying willingness.

After analyzing the chi-square test of independence between the variables employment status and buying willingness of the prospects, since the p-value is less than our chosen significance level i.e.  $\alpha = 0.05$ , we can reject the null hypothesis and conclude that there is an association between the employment status of the prospects and the health insurance buying willingness.

Pearson Correlation coefficient is 0.623, that means the employment status (employed full time/ part time/ self employed/ retired/ unemployed) of prospects and buying intention is highly positively co-related i.e. full time employed prospects show more willingness followed by part timers and least by retired and unemployed.

H5: There is no relationship between the employment sector of the prospect and the buying willingness.

After analyzing the chi-square test of independence between the variables employment status and buying willingness of the prospects, since the p-value is less than our chosen significance level i.e.  $\alpha = 0.05$ , we can reject the null hypothesis and conclude that there is an association between the employment status of the prospects and the health insurance buying willingness. Pearson Correlation coefficient is 0.739 that means the employment sector (Service/ Commercial/ Industrial/Agriculture/ others) of prospects and buying intention are positively co-related i.e. Service class prospects show highest willingness followed by and least by prospects employed in commercial sector, industrial sector, agriculture and others.

H6: There is no relationship between the location of the prospect and the buying willingness.

After analyzing the chi-square test of independence between the variables location of (residence/ workplace) and buying willingness of the prospects, since the p-value is less than our chosen significance level i.e.  $\alpha = 0.05$ , we can reject the null hypothesis and conclude that there is an association between the location of the prospects and the health insurance buying willingness. Pearson Correlation coefficient is 0.611 that means the location (urban/ semi-urban/ rural) of prospects and buying intention are positively co-related i.e. urban people are more willing to buy the health insurance followed by semi-urban.

## 7. Critical

H7: There is no relationship between the awareness of health insurance plans and the buying willingness.

After analyzing the chi-square test of independence between the variables awareness of health insurance plans and buying willingness of the prospects, since the p-value is less than our chosen significance level i.e.  $\alpha = 0.05$ , we can reject the null hypothesis and conclude that there is an association between the awareness of health insurance plans and the health insurance buying willingness. Pearson Correlation coefficient is 0.776 that means the awareness of health insurance plans in the prospects lead to buying intention. The two are positively co-related i.e. aware people are more willing to buy the health insurance.

H8: There is no relationship between the level of religiousness (Islamic culture) and the buying willingness.

After analyzing the chi-square test of independence between the variables level of religiousness (Islamic culture) and buying willingness of the prospects, since the p-value is less than our chosen significance level i.e.  $\alpha = 0.05$ , we can reject the null hypothesis and conclude that there is an association between the level of religiousness (Islamic culture) and the health insurance buying willingness. Pearson Correlation coefficient is 0.855 that means high level of religiousness (Islamic culture) among the prospects lead to non-buying intention. The two are positively co-related i.e. highly religious people who follow Islamic culture are more not willing to buy the health insurance.

H9: There is no relationship between the distribution channels of the insurers and the buying willingness.

After analyzing the chi-square test of independence between the variables distribution channels (ease of buying) of the insurers and buying willingness of the prospects, since the p-value is less than our chosen significance level i.e.  $\alpha = 0.05$ , we can reject the null hypothesis and conclude that there is an association between the distribution channels of the insurers and the health insurance buying willingness. Pearson Correlation coefficient is 0.512 that means high level of distribution channels activity will provide ease of buying among the prospects which will lead to buying. The two are positively co-related i.e. distribution channels may affect willing to buy the health insurance.

H10: There is no relationship between the trust of the insurers and the buying willingness.

After analyzing the chi-square test of independence between the variables trust of the insurers regarding claim benefits and buying willingness of the prospects, since the p-value is less than our chosen significance level i.e.  $\alpha = 0.05$ , we can reject the null hypothesis and conclude that there is an association between the trust of the insurers and the health insurance buying willingness. Pearson Correlation coefficient is 0.800 that means most of the Muslims don't trust and believe that insurers will give claim benefits in case of any critical disease.

H11: There is no relationship between the claim process requirements and the buying willingness.

After analyzing the chi-square test of independence between the variables claim process requirements of the insurers regarding claim benefits and buying willingness of the prospects, since the p-value is less than our chosen significance level i.e.  $\alpha = 0.05$ , we can reject the null hypothesis and conclude that there is an association between the claim process requirements of the insurers and the health insurance buying willingness. Pearson Correlation coefficient is 0.918 that means most of the respondents' don't understand the claim process requirements. Hence insurers should make claim formalities easier and should aware people about it.

H12: There is no relationship between the Policy conditions and the buying willingness.

After analyzing the chi-square test of independence between the variables Policy conditions of the insurers and buying willingness of the prospects, since the p-value is less than our chosen significance level i.e.  $\alpha = 0.05$ , we can reject the null hypothesis and conclude that there is an association between the Policy conditions and the health insurance buying willingness. Pearson Correlation coefficient is 0.815 that means most of the respondents' don't understand the policy conditions and find it cobweb. Hence insurers should simplify policy conditions to increase the sale.

H13: There is no relationship between the Hospital network and the buying willingness.

After analyzing the chi-square test of independence between the variables Hospital network of the insurers and buying willingness of the prospects, since the p-value is less than our chosen significance level i.e.  $\alpha = 0.05$ , we can reject the null hypothesis and conclude that there is an association between the Hospital network and the health insurance buying willingness. Pearson Correlation coefficient is 0.837 that means most of the respondents' don't find nearby hospitals in the empanelled list of insurers and find it unattractive. Hence insurers should include more local hospitals especially medium and small size to increase the sale.

H14: There is no relationship between the fear of default in premium payment and the buying willingness.

After analyzing the chi-square test of independence between the variables fear of default in premium payment and buying willingness of the prospects, since the p-value is less than our chosen significance level i.e.  $\alpha = 0.05$ , we can reject the null hypothesis and conclude that there is an association between the fear of default in premium payment and the health insurance buying willingness. Pearson Correlation coefficient is 0.823 that means most of the respondents' fear that they won't be able to pay the future premiums because of their irregular income. Hence insurers should increase grace period or include premium waiver or holiday concept to increase the reach.

## 7. Conclusions and Managerial implications

Our study has supported previous studies related to demographic factors which play an important role in buyer's decision making process. Age is an important factor, young Muslims are more adaptive and responsive to the change that is taking place all around them. They follow religion and tries to know the truth whether something is really forbidden in Islam or not. Most of the Young educated Muslims are reading Koran themselves and hence they know religious matters also which make them independent in making decisions. Our study found that young educated Muslims are more willing to buy health insurance policy. Employment sector, income and status of employment are all important factors, the service class employee especially in government sector are keen to buy the health insurance. Location of residence/ work place is also important factor as per our study urban people are more aware about health insurance as compare to semi-urban or rural group. Besides, demographic factors, our study found out importance of other critical factors like awareness, religion, and distribution channel, doubt of claim benefits, claim process, hospital network, policy conditions and fear of premium default. As per our study, religion is a deterrent in buying health insurance but education is reducing it. Insurers should enhance their reach among Muslim localities and should appoint more agents/ brokers among them. Because of low education and awareness, most of the Muslims don't trust whether they will get claim benefits or not. Insurers should run special awareness campaign among Muslim areas. They want that claim process and policy conditions should be further simplified. Network of empanelled hospitals does not include local nearby hospitals which is again a deterrent.

## 8. Limitations and further study

Our study was conducted in Allahabad district of Uttar Pradesh, India only. The results may or may not hold good for other districts or states. Although, we tried to include all the possible factors but our study has ignored the effect of gender on the buying behavior. This study must be conducted in other places also and should try to include other factors which have been ignored in our study because of less significance.

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