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Impact of Influencing Factors on the Health Insurance Choices of Policyholders in Chengalpattu District, Tamilnadu

B. Nithyakalyani[1], Dr.T. Rani[2]
[1]Research Scholar, Annamalai University, Tamilnadu
[2]Assistant Professor of Commerce, Annamalai University.

Abstract
Taking health insurance policy is most important for people in the present scenario, since medical expenses goes up, hence health insurance premium ensures quality medical services to needy people at lower cost. Many factors influence the people to take purchase decision on health insurance policies. Hence, the researcher concentrated in this concept. For this purpose the researcher selected Chengalpattu district in the state of Tamilnadu as study area, from where five private health insurance companies were selected and from each company a total of 160 policyholders were taken as sample, it resulted to a total sample size of 800 respondents. Primary data were collected from the respondents by using a structured interview schedule. The researchers applied the statistical tools of descriptive statistics, factor analysis and Chi-square test for analysing the data. The study found that that the factors "Fear and cautiousness factors" and "Health related factors" had high level of influence on the respondents to buy health insurance policies. Significant differences were found in level of influence with variables of gender, age, number of family members with the age of above 50 years, education and income level of the respondents. No significant differences were found with the factors, marital status, primary earning member of the family, family size and occupation. Significant differences were found in level of influence with the factor whether the respondent made claim earlier, amount of premium paid by the respondents, amount of policy, number of times claim was made.
Keywords: *Health insurance, premium, policy, influencing factors, diseases, cautiousness.*

INTRODUCTION

In the present world It is necessary for the people, especially country like India to buy health insurance policies, since majority of people belong to either lower or middle income groups. The probability of diseases is increasing due to various reasons. The cost of medical facilities is also very high in India. Lower or middle class people could not bear such expenses. This limitation is overcome by health insurance policies. Insurance is the best solution to handle such risk. The insurance helps to save lives, health, things and business also. The growth of insurance industry shows developments in different dimensions. The cost of medical expenses has witnessed robust growth every year. Poor health, cost of medicine, innovative and developed medical technology are the cause for increase in the medical expenses. Health insurance concept was introduced to face the financial risk related to the medical treatment. The low income earning people are also getting the medical insurance through the central and state government sponsored health insurance schemes. The health insurance industry in India deals with huge amount and Indian health sector has globally most valued one. The health insurance sector is governed by both private and public sectors. There are different schemes available at different cost. The marketing of health insurance policies become more competitive. All the earning persons are not taking health insurance policies, some persons alone are taking health insurance policies, for buying and choosing health insurance policies, many factors are influencing. On the other hand, many companies are providing such financial product with wide variety of health insurance policies. There are many factors which are influencing the people to take decision about purchase of health insurance policies. Understanding the factors influenced the policyholders in taking purchase decision of health insurance policies will be helpful for the health insurance companies in framing marketing strategies for promoting their products in near future.

LITERATURE REVIEW

Joshi NR and Shah SM (2015) found that 81% of respondents make their premiums half-yearly and annually, with self-decision and insurance agents being the most preferred factors. Risk coverage, protection against high medical costs, and tax benefits were the main objectives of health insurance policies. Sini V and Karpagam CR (2016) found that respondents were neutral about tax benefit, risk coverage, saving, and security with high return. Jacob A (2018) found that the most important factor for choosing a health insurance company was easy accessibility of linked hospitals, with 36% of respondents being satisfied.

Pandey DL, Risal N, Malla P (2021) and Ray S and Dutta R (2022) identified factors influencing policyholders in purchasing health insurance policies in Nepal, but some respondents did not mention these policy characteristics, possibly due to lower age groups, unemployment, unmarried, and lower family income. Biswas P (2022) found that perceived preference of services specific factors such as communication with customers, hospitalization benefits, claim settlement, customer's awareness, and service quality were the main reasons for this preference.

Saraf D., Baser N. (2023) and Rout P.K., Parida P.K. (2024) found that there was still a low level of awareness and less willingness to purchase health insurance products despite the unprecedented need created by the COVID-19 pandemic. Socioeconomic indicators like literacy level, income level, marketing parameters, and personal factors have a significant impact on the buying of individual health insurance.

Parvathi P.C., and Paul D. (2024) studied the factors influencing policyholders in intention of purchasing health insurance policies in Kerala, finding that perceived risk, awareness, and cost are influencing intention to purchase. Positive regression coefficients indicate that as these variables increase, purchase intention also increases, while negative coefficients indicate that perception about cost negatively influences willingness.

Objectives

The study has been undertaken with the following objectives,

1. To study the factors influenced the policyholders to take purchase decision on health insurance policies in Chengalpattu district.
2. To assess the significant differences between influencing factors and socio-economic factors of the respondents.
3. To analyse the significant differences between influencing factors and health insurance related factors of the respondents.

METHODOLOGY

As the most emerge product of insurance companies in the present time, the researcher considered health insurance policies for the study. In this concept, the researcher studied the factors influenced the policyholders to take purchase decision on health insurance policies. For this purpose the researcher selected Chengalpattu district in the state of Tamilnadu as study area. The researcher mainly concentrated on health insurance policies issued by private health insurance companies, with this view, the researcher selected a total of five private health insurance companies as sample units namely, Star Health Insurance, HDFC Ergo General Insurance, Tata AIG General Insurance, ICICI Lombard General Insurance and Care Health Insurance. From each company, the researcher considered a total of 160 policyholders who were holding health insurance policies, which resulted to a total sample size of 800 respondents. They were selected by applying convenient sampling method and primary data were collected from the respondents by using a structured interview schedule. The researcher identified a total of 20 factors which are probably influence the policyholders to take purchase decision about health insurance policies. The researchers applied the statistical tools of descriptive statistics, factor analysis and Chi-square test for analysing the data.

RESULTS AND DISCUSSION

Customers buy health insurance policies from various companies and various types of policies, the purchase of health insurance policies by the respondents is influenced by various factors. The researcher identified a total of 20 factors which are probably influence them to buy health insurance policies. The researcher applied factor analysis on the 20 factors for reducing such factors, since they seem to be high in number and subsequently they are analysed. These results are presented in this part of the paper.

The study found a total of twenty different characteristics that are likely to influence clients in the Chengalpattu area to purchase health insurance plans. The researcher utilized factor analysis in order to cut down on the number of variables that were chosen for the study in this particular aspect. The number of variables that were chosen for the investigation is very extensive. Before and after the factor extraction, the values that were computed for the communalities of the factors that impacted the respondents to purchase health insurance plans are presented in the table that is described below. 1 is supposed to represent the original commonality, which is the commonality that exists before extraction. Nevertheless, once the factors have been extracted, the communality is determined by the quantity of variance that is accessible for the study of the variable that has been chosen. There is a one hundred percent variance

available for each of the elements to be analyzed individually. On the other hand, the extraction of components results in the loss of the same variance throughout the process. As a result, it is essential to conduct an analysis of the residual variance that is accessible for the study. The individual differences are presented in the communalities that are listed that follow. The proportion of variation that is explained by the variables after they have been extracted by component analysis is referred to as the communalities.

Table 1: Communalities – Factors Influencing to Buy Health Insurance

Sl. No.	Factors	Initial	Extraction
1	High medical expenses	1.000	0.508
2	Lower income	1.000	0.599
3	Big family	1.000	0.520
4	Single earner	1.000	0.533
5	Fear about diseases	1.000	0.528
6	Heredity diseases	1.000	0.558
7	Cautiousness	1.000	0.703
8	To get better medical services	1.000	0.589
9	Influence of family members	1.000	0.544
10	Influence of insurance agents	1.000	0.582
11	Advertisements about health insurance	1.000	0.544
12	To get tax benefit	1.000	0.532
13	To avoid spending out of pocket for medical expenses	1.000	0.747
14	Fear about new diseases	1.000	0.552
15	Impact of Covid-19	1.000	0.551
16	Wide hospital coverage	1.000	0.596
17	Hospital coverage near my location	1.000	0.506
18	Posts about health insurance on social media	1.000	0.537
19	Wide diseases covered by the policy	1.000	0.527
20	Many add-on services	1.000	0.553

The data presented in Table 1 indicates that the individual variances of the variables were substantial and that they were within a range that was statistically significant. The conclusion that can be drawn from the findings is that the computed values of the extracted communalities for each of the components are higher than 0.5. In order to do the factor analysis, the retrieved communalities are suitable. The value of the retrieved communalities among the variables is increasing, which indicates that it is becoming better. Since this is the case, factor analysis may be performed on all of the factors that were chosen for the research. In order to identify and estimate the eigenvalues of principal components, the factor analysis makes use of the Principal Component Analysis (PCA) procedure. Following the completion of the calculation of the eigenvalues of the components, the factors are arranged in a decreasing order with respect to the eigenvalues that were computed. In accordance with the criteria established by Kaiser, the elements that possess an Eigenvalue that is more than one are preserved for the research. This makes it possible to reduce the number of recognized factors in the order in which they are presented in the table. According to the findings of the study, there were a total of twenty factors that were likely responsible for the respondents' decision to purchase health insurance coverage. The eigenvalues, percentage of variance, cumulative percentage for starting eigenvalues, and rotation sums of squared loadings are shown in Table 2 as a consequence of the utilization of component analysis, which was employed in order to minimize and combine the inter correlated variables into a single entity.

Table 2: Total Variance Explained - Factors Influencing to Buy Health Insurance

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.457	12.285	12.285	2.457	12.285	12.285
2	2.133	10.665	22.950	2.133	10.665	22.950
3	1.887	9.435	32.385	1.887	9.435	32.385
4	1.713	8.565	40.950	1.713	8.565	40.950

5	1.432	7.160	48.110	1.432	7.160	48.110
6	1.236	6.180	54.290	1.236	6.180	54.290
7	1.042	5.210	59.500			
8	0.956	4.780	64.280			
9	0.921	4.605	68.885			
10	0.861	4.305	73.190			
11	0.830	4.150	77.340			
12	0.728	3.640	80.980			
13	0.624	3.120	84.100			
14	0.602	3.010	87.110			
15	0.534	2.670	89.780			
16	0.521	2.605	92.385			
17	0.461	2.305	94.690			
18	0.389	1.945	96.635			
19	0.342	1.710	98.345			
20	0.331	1.655	100.000			

Extraction Method: Principal Component Analysis.

The findings of the eigenvalue analysis are presented in Table 2, which shows the results both at the beginning of the process and after the rotation approach was applied to the factors that impacted customers to acquire health insurance plans in the region under investigation. The findings demonstrated that all twenty of the factors that were chosen were reduced to six factors through the utilization of factor analysis carried out in accordance with the rotation technique, which is defined as having an Eigenvalue that is more than 1. A total of 54.290 percent of the variation in the included components was explained by each of the six factors. It is presumed that the variance that has been explained is sufficient, and that the variables that have been retrieved can be utilized for additional study. The orthogonal rotation operation, also known as Varimax, is utilized in order to change the extracted components that reflect the twenty variables that have been chosen. An indication of the factor loading of each variable to the extracted factors is provided by the Rotated Component Matrix, often known as the RCM. In some contexts, the factor loadings can be seen as the correlation that exists between the variables and the factors. According to the presumption, each and every factor that is taken into consideration for the study must have a substantial factor loading to just one factor, while the factor loadings of all the other extracted factors must be inconsequential. Table 3 has a presentation of its findings, as well as the correlation under several rotated matrix conditions.

Table 3: Factors Influencing to Buy Health Insurance (Rotated Component Matrix[a])

Sl. No.	Factors	Component						Factor Name
		1	2	3	4	5	6	
1	Lower income	0.824						Financial Factors
2	Single earner	0.812						
3	To get tax benefit	0.796						
4	Fear about diseases		0.879					Health Related Factors
5	Heredity diseases		0.829					
6	Fear about new diseases		0.801					
7	Impact of Covid-19		0.754					
8	Big family			0.792				Family Related Factors
9	Influence of family members			0.749				
10	High medical expenses				0.819			Fear and Cautiousness Factors
11	To avoid spending out of pocket for medical expenses				0.769			
12	Cautiousness				0.718			
13	Influence of insurance agents					0.783		Marketing and Promotional Factors
14	Advertisements about health insurance					0.771		

Sl. No.	Factors	Component						Factor Name
		1	2	3	4	5	6	
15	Posts about health insurance on social media					0.698		
16	To get better medical services						0.872	Services Related Factors
17	Wide hospital coverage						0.842	
18	Hospital coverage near my location						0.785	
19	Wide diseases covered by the policy						0.734	
20	Many add-on services						0.676	

Source: Computed from Primary Data

A factor analysis was performed on the factors that impacted the respondents to purchase health insurance plans in the Chengalpattu area. The findings of this research are presented in Table 3. Through the utilization of factor analysis, a total of twenty variables were narrowed down to six components. Considering that factors 1 through 3 had a strong correlation with factor 1, it was decided to combine them into a single category that was thereafter referred to as "Financial Factors." As a result of the substantial correlation that existed between factor 2 and factors 4 and 7, these three variables were consolidated into a single category that was referred to as "Health Related Factors." Because of the strong correlation that existed between factor 3 and factors 8 and 9, these three variables were consolidated into a single category and given the name "Family Related Factors." Because the factors 10 to 12 had a strong correlation with factor 4, they were combined together into a single category and given the name "Fear and Cautiousness Factors." as a result of this correlation. As a result of the substantial correlation that existed between factor 5 and factors 13 to 15, these factors were consolidated into a single category and given the name "Marketing and Promotional Factors as a result." There was a strong correlation between factor 6 and the factors 16 to 20, which led to their consolidation into a single component that was subsequently referred to as the "Services Related Factors."

Descriptive Statistics

In order to know among six reduced factors, the level of influence on the respondents to buy health insurance policies, which dimension of the factor influenced more on the respondents to buy health insurance policies and which factor influenced low on the respondents to buy health insurance policies, the researcher calculated standard deviation, mean, and coefficient of variation and the results are presented in table 4.

Table 4: Descriptive Statistics of Factors Influencing to Buy Health Insurance Policies

Sl. No.	Factors	Mean	SD	CV	Rank
1	Financial factors	3.13	0.74	23.50	III
2	Health related factors	3.23	0.69	21.40	II
3	Family related factors	3.08	0.95	30.69	V
4	Fear and cautiousness factors	3.34	0.76	22.85	I
5	Marketing and promotional factors	3.02	0.77	25.63	VI
6	Services related factors	3.11	0.69	22.13	IV
	Overall	3.15	0.77	24.33	

Source: Primary Data

Table 4 reveals the results of descriptive statistics of factors influencing the respondents to buy health insurance policies under six different dimensions as reduced by factor analysis. The results show that the calculated mean value of the dimension “Fear and cautiousness factors” was highest among the dimensions, which was 3.34, it was ranked first and therefore the above factor influenced more on the respondents to buy health insurance policies. The results of SD (0.76) and CV (22.85 per cent) showed that there was lower level of deviation in level of influence from its mean value. Followed by the factor “Health related factors” also influenced the respondents more, its calculated mean value was also high at 3.23, it was ranked 2nd and there was lower level of deviation in influence level of the above factor as shown by the results of SD (0.69) and CV (21.40 per cent). The factor “Marketing and promotional factors” influenced less on the respondents to buy health insurance policies, since its calculated mean

value was lowest at 3.02 and it was ranked last (6th), the deviation level was also found to be low in influence of the above factor as indicated by the results of SD (0.77) and CV (25.63 per cent). Followed by, "Family related factors" also influenced less on the respondents, since its calculated mean value was also low at 3.08.

Chi-Square Test between Influencing Factors and Socio Economic Factors

The degree of effect exerted by a number of different elements may be significantly different depending on the socio-economic parameters that are taken into consideration. The following null hypothesis was formulated in order to determine whether or not there are any significant variations in the amount of impact exerted by the components; the same hypothesis was evaluated using the Chi-square test, and the findings are provided in Table 5.

Ho: There are no significant differences in influence level of the factors on the respondents to buy health insurance policies with their socio-economic factors.

Table 5: Chi-Square between Influencing Factors and Socio Economic Factors

Sl. No.	Variables	Chi-Square	df	Sig. (p-value)	H_o Result
1	Gender	10.409*	4	0.034	Rejected
2	Marital Status	8.702	4	0.069	Accepted
3	Primary Earning Member	7.330	4	0.119	Accepted
4	Residential Area	9.7808	4	0.044	Rejected
5	Age	31.350*	16	0.012	Rejected
6	Family Size	11.267	8	0.187	Accepted
7	Member with > 50 Years	16.140*	8	0.040	Rejected
8	No. of Earning Members	14.055	8	0.080	Accepted
9	Education	34.453*	16	0.005	Rejected
10	Occupation	29.046	20	0.087	Accepted
11	Income	30.197*	12	0.003	Rejected

Source: Primary Data

Because the Chi-square value that was calculated (10.409) was statistically significant at the 5% level, the null hypothesis was rejected. This is demonstrated in Table 5, which demonstrates that there were significant differences in the influence of the factors that determined the respondents to buy health insurance policies with the gender of the respondents. Since the Chi-square value that was calculated for the respondents (31.350) was statistically significant at the 5% level, the null hypothesis was rejected. This is because the demographic factor of age made significant differences in the influence of the factors on the respondents to purchase health insurance policies in the study area. Due to the fact that the Chi-square value (16.140) that was calculated for the respondents was statistically significant at the 5% level, the null hypothesis was rejected. This was because the findings indicated that there were significant differences in the influence of the factors that determined the respondents to purchase health insurance policies with the number of family members who were older than 50 years. This was due to the fact that the Chi-square value that was calculated for the respondents (34.453) was statistically significant at the 1% level; consequently, the null hypothesis was rejected. The demographic factor education level of the respondents made significant differences in the influence of the factors on the respondents to buy health insurance policies in the study area. Due to the fact that the Chi-square value that was calculated (30.197) was statistically significant at the 1% level, the null hypothesis was rejected. This allows for the identification of significant differences in the influence of the factors that determine the respondents to buy health insurance policies with the income level of the respondents. With regard to the socio-economic parameters of marital status, primary earning member of the family, family size, and occupation of the respondents, there were no significant variations observed in the influence of the factors that determined the respondents to purchase health insurance plans in the research area.

Chi-Square between Influencing Factors and Insurance Related Factors

The influence level of various factors influenced the respondents to buy health insurance policies may get significant differences on the basis of certain health insurance related factors. For testing the above, a null hypothesis was framed, the same was tested applying Chi-square test and the results are presented in table 6.

Ho: There are no significant differences in influence level of the factors on the respondents to buy health insurance policies with their health insurance related factors.

Table 6: Chi-Square between Influencing Factors and Insurance Related Factors

Sl. No.	Variables	Chi-Square	df	Sig.	H_o Result
1	Insurance Company	8.929	4	0.063	Accepted
2	Whether made Claim	10.708*	4	0.042	Rejected
3	Premium Amount	21.225*	12	0.048	Rejected
4	Policy Coverage	21.488*	12	0.044	Rejected
5	Experience	16.387	12	0.174	Accepted
6	No. of Times Claimed	29.707*	16	0.020	Rejected
7	Source of Awareness	31.603*	20	0.048	Rejected

Source: Primary Data

Table 6 shows that there were significant differences in influence of the factors determining the respondents to buy health insurance policies with the insurance related factor of whether the respondents made claim earlier or not, since their calculated Chi-square value (10.708) was statistically significant at 5 per cent level, hence the null hypothesis was rejected. The insurance related factor amount of premium paid by the respondents made significant differences in influence of the factors on the respondents to buy health insurance policies in the study area, since their calculated Chi-square value (21.225) was statistically significant at 5 per cent level, hence the null hypothesis was rejected. Significant differences were found in influence of the factors determining the respondents to buy health insurance policies with amount of policy, since their calculated Chi-square value (21.488) was statistically significant at 5 per cent level, hence the null hypothesis was rejected. The insurance related factor, number of times claim was made by the respondents made significant differences in influence of the factors on the respondents to buy health insurance policies in the study area, since their calculated Chi-square value (29.707) was statistically significant at 1 per cent level, hence the null hypothesis was rejected. Significant differences were found in influence of the factors determining the respondents to buy health insurance policies with source of awareness of the respondents about health insurance policies, since their calculated Chi-square value (31.603) was statistically significant at 5 per cent level, hence the null hypothesis was rejected. No significant differences were identified in influence of the factors determining the respondents to buy health insurance policies in the study area with the insurance related factors of insurance company where they had health insurance policy and experience of the respondents in terms of holding health insurance policies.

CONCLUSION

In the present world It is necessary for the people, especially country like India to buy health insurance policies, since majority of people belong to either lower or middle income groups. The probability of diseases is increasing due to various reasons. The cost of medical facilities is also very high in India. Lower or middle class people could not bear such expenses. This limitation is overcome by health insurance policies. Many companies are providing such financial product with wide variety of health insurance policies. There are many factors which are influencing the people to take decision about purchase of health insurance policies. In this context, this aspect has been studied in Chengalpattu district of the state of Tamilnadu. The study evidenced that the factors “Fear and cautiousness factors” and “Health related factors” had high level of influence on the respondents to buy health insurance policies. The factors “Marketing and promotional factors” and “Family related factors” had influenced less on the respondents to buy health insurance policies in Chengalpattu district. The study also found that significant differences were found in level of influence of various factors with the socio-economic variables of age, gender, number of members in the family with the age of above 50 years, education and income level of the respondents. No significant differences were found with the factors, marital status, primary earning member of the family, family size and occupation. It was also identified that significant differences were found in level of influence of various factors on the respondents to buy health insurance policies with the insurance related factors of whether the respondent made claim earlier, amount of premium paid by the respondents, amount of policy, number of times claim was made by the respondents and source of awareness. No significant differences were found with the factors, insurance company where health

insurance policy was held and experience of the respondents in terms of holding health insurance policies. The results of the study many help the health insurance companies by way of framing marketing strategies of their product by giving more weightage to high influencing factors.

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