

How to Cite:

Vijayanand, N., Sundar, G. N., Rathore, A., Rawal, P., Loya, A. R., & Sucharitha, Y. (2022). Empirical study of consumer behaviour in health insurance sector. *International Journal of Health Sciences*, 6(S3), 9861–9875. <https://doi.org/10.53730/ijhs.v6nS3.8357>

Empirical study of consumer behaviour in health insurance sector

N. Vijayanand

Assistant Professor, Master of Business Administration, Vels Institute of Science , Technology and Advanced Studies, Chennai, Tamilnadu, India

G. Naveen Sundar

Associate professor, Department of Computer Science and Engineering, Karunya Institute of Technology and Sciences, Coimbatore, Tamilnadu, India

Archana Rathore

Associate Professor, ICFAI Business School, The ICFAI University, Jaipur, India

Priyanka Rawal

Assistant Professor (SG), Faculty of management and Commerce, Jagran Lakecity University, Bhopal, Madhya Pradesh, India

Arpit R. Loya

Assistant Professor, Department of Marketing, Prestige Institute of Management and Research, Indore, Madhya Pradesh, India

Yadala Sucharitha

Assistant Professor, Department of Computer Science and Engineering, CMR Institute of Technology, Hyderabad, TS state, India

Abstract--This article devoted to the analysis of consumption of services held under Health Insurance, which pertains to utilization of health services. Health utilization behaviour of the sampled households was observed by obtaining information on different health variables like monthly health expenditure, health risk, health status, types of morbidity and hospitalization. It also encompasses information about choice of treatment and choice of type of health facility -public/private. A comparison of insured and uninsured households was made in the study so as to comprehend the difference in their health utilization behaviour. An earnest effort has been made to examine the level of satisfaction regarding Health Insurance policy among the insured household and also focused on the two major issues of Health Insurance sector related to the presence of information asymmetries viz Adverse Selection and Moral Hazard. Due to better private information about their health status, the insured

may have a positive association between health risk and purchase of Health Insurance (Adverse Selection). Besides, the consumers might have a tendency to over utilize the health services because they are available at lower cost due to purchase of Health Insurance (Moral Hazard). Presence of both these problems is empirically tested in this paper.

Keywords---health, insurance, dimension, WHO, policy, sector.

Introduction

Economic development is a multidimensional and dynamic concept, which embraces quantitative as well as qualitative aspects of human life. It is a process in which economic growth is accompanied by social, institutional and cultural change, leading to optimal utilization of resources – natural, human and physical. So, along with increase in Gross National Product (GNP), improvement in Human Development Index (HDI) of a country is considered desirable. The three dimensions of HDI – health, education and income, reflect the quality of life of its populace. A long and healthy life envisaged in life expectancy is an important dimension of HDI and an important determinant of economic growth of any nation. Bloom, Canning and Sevilla (2004) analysed evidence from cross-country studies and indicated that higher life expectancy level has a positive effect on economic growth. Gupta and Mitra (2004) confirmed this positive two-way relationship between health and growth for the Indian economy during the period 1973 - 2000. They emphasized that good health leads to greater productivity levels and generates higher growth; higher GNP leads to better development of human capital.

In Economic theory, Grossman (1972) proposed ‘the human capital model’ as an application of theory of consumption. He opined that health can be a source of utility and future income levels and stated that consumers demand health for two reasons, –As a consumption commodity, it directly enters their preference functions, or, put differently, sick days are a source of disutility. As an investment commodity, it determines the total amount of time available for market and non-market activities. (p.350). Pertinent literature (Schultz, 1961; Denison, 1962; Meier, 1990) suggested that investment in human capital along with physical capital can augment the process of economic development. Improvement in quality of human resource was considered as necessary, if not sufficient condition of economic well-being. ‘Health’ as a human resource has gained dominant attention of not only economists, but has also posed a serious concern for policy makers across the globe. The Declaration of Alma Ata (1978) described health as –a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity, is a fundamental human right and that the attainment of the highest possible level of health is a most important world-wide social goal whose realization requires the action of many other social and economic sectors in addition to the health sector (WHO, 2003). This definition embraced diverse dimensions of health like nutrition, personal hygiene, family life, community living, environmental conditions and access to social services [1]. It eventually set before the world a catchphrase ‘Health for All by 2000’. Health

occupied an important place in the Millennium Development Goals (MDGs) adopted at the Millennium Development Summit, held in New York in the year 2000. The WHO (2005) also assigned pivotal role to health in fighting global poverty levels, hunger, gender inequality and illiteracy. With the introduction of goal of Universal Health Coverage (UHC), the World Bank (2013) served as a milestone in underlining the importance of health. UHC is defined by WHO (2010) as –ensuring that all people can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship[2]. In 2015, with culmination of MDG timeframe, a ‘2030 Agenda for Sustainable Development’ was envisioned in 17 Sustainable Development Goals (SDGs) for achieving health objectives both directly as well as indirectly.

Literature Survey

Indian Economy developed, as a mixed economy in which there is coexistence of public and private sector. This pattern of development has strong traces in the health sector. To start with, India embraced a public sector dominated model for providing health care guided by the Constitution of India, which made it obligatory for the State to ensure proper health of its citizens. The Directive Principles of State Policy under clause no 47, stated that it is primary function of the Government to improvise nutritional standards and public health so as to raise the level of living of citizens. Some of the other provisions given in the Constitution are as follows: Article 21 guaranteed the fundamental right to life and also held the State responsible for preserving the life of all citizens by offering medical assistance. □ Article 38 called upon the State to diminish inequalities in income and healthcare. □ Article 39 directed public policies to secure strength and health of men, women & children and ensures that they are not abused in any manner. Article 41 imposed upon the State to provide public assistance for the disabled and the sick [3]. □ Article 42 provisioned for fair working conditions including maternity benefit. (Ministry of Statistics and Programme Implementation, GOI, 2015).

Since India has a federal form of Government, the Constitution of India allocated the subject of health to the State Government. However, the Union Government can initiate, finance and coordinate public health programmes for the improvement of health of its citizens. In spite of this ideal role of Government in health provisioning, a prudent policy for providing health care was missing. Public health programs made conscious effort, but inefficiencies diminished the ability of public sector to catch up with expanding medical requirements of the Indian masses. An imbalance between supply and demand of public health services provided a prospect for private sector to expand.

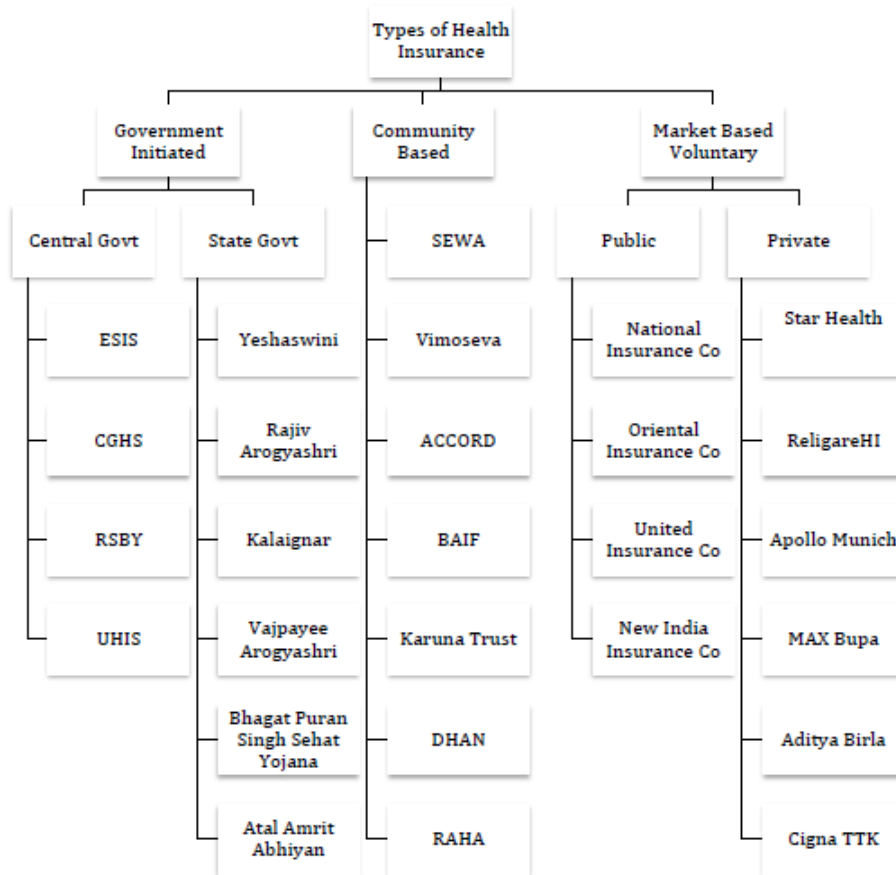


Figure 1. Types of Health Insurance Arrangements in India

Figure.1. clearly shows that Health Insurance had been provided by several agencies in India like the Government, Non Government Organizations (NGOs) and Insurance Companies. The Government initiated Health Insurance Schemes like ESIS, CGHS and RSBY, were sponsored by the Central Government and provided some kind of social security to a target group of population. Some State Governments also sponsored Health Insurance schemes like –Yeshaswini by Karnataka, –Kudumbasree by Kerala Government and in Andhra Pradesh, by the name of –Rajiv Arogyasri. In Punjab, a smart card based cashless Health Insurance scheme titled –Bhagat Puran Singh Sehat Bima Yojana was launched. Public Health Insurance schemes largely aimed to provide financial protection against medical exigencies to the BPL and other under privileged population.

The NGOs, Local Community Societies or Charitable Trusts launched Community Based Health Insurance (CBHI) Schemes to protect the vulnerable sections of society against catastrophic health expenditure. Such schemes were generally not-for-profit insurance schemes that catered to the rural and informal sector[4] In the category of Market-based Health Insurance Schemes, public and private insurance companies offered consumers voluntary Health Insurance schemes. There were four public insurers and more than twenty-five private insurers. Government and in Andhra Pradesh, by the name of –Rajiv Arogyasril. In

Punjab, a smart card based cashless Health Insurance scheme titled –Bhagat Puran Singh Sehat Bima Yojana was launched. Public Health Insurance schemes largely aimed to provide financial protection against medical exigencies to the BPL and other under privileged population.

The NGOs, Local Community Societies or Charitable Trusts launched Community Based Health Insurance (CBHI) Schemes to protect the vulnerable sections of society against catastrophic health expenditure. Such schemes were generally not-for-profit insurance schemes that catered to the rural and informal sector. In the category of Market-based Health Insurance Schemes, public and private insurance companies offered consumers voluntary Health Insurance schemes [5]. There were four public insurers and more than twenty-five private insurers. Initially, this scheme was launched in Kanpur and Delhi in 1952. Keeping in tandem with demographic growth and industrialization, this scheme was extended to 22 States in the year 2005 and further to 33 States and Union Territories in 2017. The number of family units registered under this scheme increased phenomenally from 1.2 lakh in 1948 to 213 lakhs in 2017 (National Portal of India).

The Central Government Health Scheme (CGHS), 1954

It was a contributory healthcare plan meant for employees and pensioners (along with the dependents) of the Central Government. It was initiated in the national capital city of Delhi and later this scheme stretched to various cities of India. For the last sixty years, the scheme has been providing healthcare needs to its beneficiaries encompassing all four pillars of the Government operations in India namely Legislature, Judiciary, Executive and Press. The monthly deduction of salary of workers ranged from Rs 15 to Rs 150. Under this scheme, treatment can be availed at Government or approved private hospitals for IPD as well as OPD. The number of beneficiaries increased more than threefold, from 10.4 lakh in 2003 to 36.7 lakh in 2015. The CGHS is largely funded by taxpayers and is increasingly been dominated by private providers unlike ESIS, which has its own medical centres. The average expenditure per employee was Rs 6376 per annum (MoHFW, National Health Accounts, GOI, 2014-15) in CGHS as against Rs 379 in ESIS.

Universal Health Insurance Scheme (UHS)

The Government of India initiated this voluntary scheme for hospitalization coverage for BPL families in 2003. In addition to coverage of Rs 30,000, it promised Rs 50 up to fifteen days to an ailing earning member. It also aimed to provide an assured sum of Rs 25,000 to the nominee, in case the head of family was deceased in a case of accident. Annual premium charged was only Rs 365 for single, Rs 548 for household with five members and Rs 730 for seven members [6]. The Government also subsidized the premium but this scheme could not meet its target of covering ten million persons. It benefited only 34,000 families (MOHFW, 2005) and 37,000 families by 2008 (USAID). States like Bihar, Uttar Pradesh, Madhya Pradesh, Orissa and West Bengal, which had higher number of BPL families, were the worst performers. Lack of public health care facilities and

dearth of interest by the public insurance companies were some of the causes behind this failure.

Rashtriya Swasthya Beema Yojana (RSBY)

The RSBY was a flagship scheme in the Indian Health Insurance scenario. This mega Health Insurance programme was introduced by the Ministry of Labour & Employment, (GoI) under the –Unorganized Workers Social Security Act, 2008 on October 1, 2007 but later on charge was given to MoHFW on April 1, 2015. A sum of Rs. 30,000 per annum was proposed to be offered to each eligible family in event of hospitalization. The scheme was primarily meant for BPL families but was extended to workers in the unorganized sector like porters, domestic workers, street vendors, sanitation workers, beneficiaries under Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) workers in beedi industries etc. across 29 states and UTs by 2015. The four public insurers and seven private insurers manage the scheme. More than 10,000 hospitals were empanelled under the scheme, of which 60 per cent belonged to the private sector.

There were no exclusions for pre-existing conditions and services under this scheme. Contribution of the Central Government and the respective State Governments was proposed to be in the ratio 3:1. From 2015-16 onwards, Central Government's share was reduced to 60 per cent of insurance premium except in North Eastern States, J&K where it is 90 per cent and Union Territories, where it is 100 per cent. The annual contribution of the beneficiary was only a registration fee of Rs 30, while it was Rs. 750 for the Government [7]. A biometric enabled Smartcard encompassing their fingerprints and photographs enable the transactions to be completely cashless and portable. Payment to insurers can also be made electronically.

National Health Protection Mission

On February 1, 2018, the biggest Health Insurance plan was announced in the Budget speech of Finance minister and launched on August 15, 2018. The Government envisages to provide Rs 5 lakh insurance coverage per family for pre and post hospitalization treatment to 10 crore families. The beneficiary families in this scheme would be identified by deprivation criteria under the Socio Economic Caste Census, 2011. In order to improve access to health facilities the Government aspires to set up 1.5 lakh health centres across the country. An evaluation of this mission would be too ambitious a task looking at its brief existence, but 13,000 multi-speciality and 10,000 speciality hospitals have been empanelled under this programme. About 3.75 lakh hospitalizations including 1.25 lakh tertiary care cases for complex treatments have received benefits of this scheme. Claims worth Rs 396 crore have been reported to be approved.

Pattern Of Health Utilization

Utilization behaviour for both kinds of health services –Outpatient Department (OPD) services or Inpatient Department (IPD) services or hospitalization was examined. It was observed that 217 households used OPD health services. A patient can choose the type of treatment amongst Allopathic, Ayurveda,

Homeopathic or other treatments. Choice of type of treatment of the respondents was observed. the respondents in the present study preferred Allopathic treatment (84.7 per cent) to Homeopathic treatment (14.8 per cent) and Ayurveda (11.1 per cent). Outpatient department medical consultation can be availed at a public or private facility (hospital, clinic or dispensary). So this choice behaviour was keenly examined.

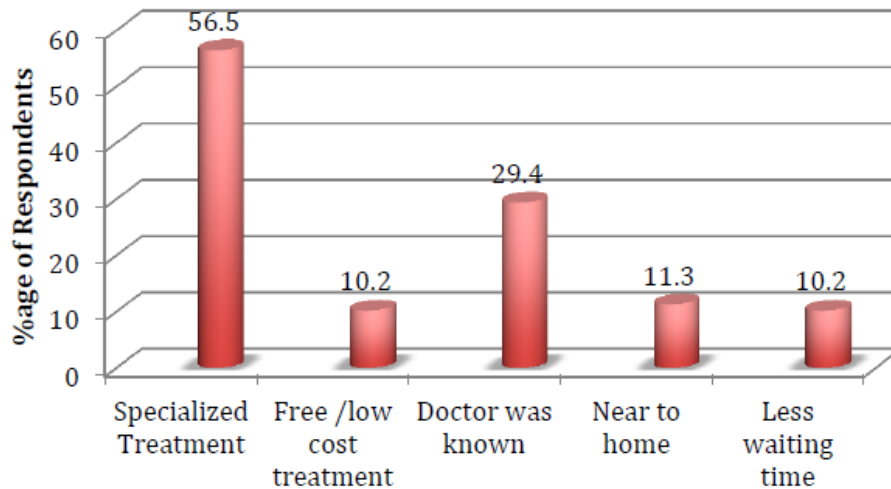


Figure 2. Motives for Choice of Place of Treatment

Figure.2. divulges consumer perceptions about choice of place of treatment. It was observed that respondent's choice was predominantly moulded by provision of specialized treatment followed by familiarity with the doctor [8]. Cost of treatment, waiting time or distance travelled played minor role in this choice making. In general, respondents gave top priority to specialized treatment. Cases of hospitalization or in patient treatment for the purpose of surgery, intensive care, maternity or therapy were also observed amongst the sampled households. Since Health Insurance principally covers IPD services (Hospitalization) in India, health utilization behaviour was observed for insured as well as uninsured households.

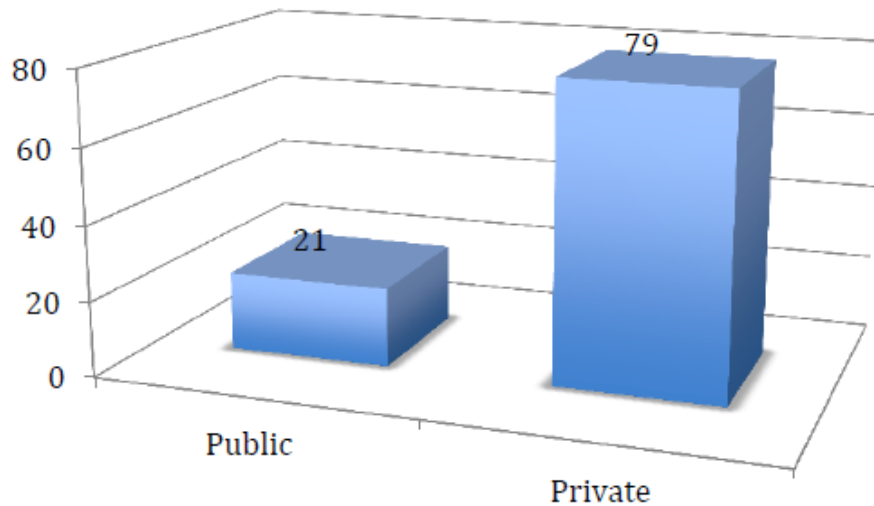


Figure 3. Health Utilization by Type of Hospital (IPD)

Figure.3. revealed that nearly four fifth (79 per cent) of the respondents in both cohorts utilized the services of private hospitals and only about one fifth (21 per cent) of them were hospitalized in public hospitals. This indicates preference for the private sector in case of IPD treatment. Other studies (Mahal, Yazbeck, Peters, & Ramana, 2001) also revealed this trend in favour of private sector healthcare facilities. It was observed that among the 301 insured respondents, 90 (30 per cent) of them faced an episode hospitalization in the family and had claimed their policy.

Consumer Satisfaction

Andaleb (1998) defined customer satisfaction as a judgment that a product or service feature, or the product or service itself, provides a pleasurable level of consumption-related fulfilment. Consumer satisfaction is crucial aspect in the service industry because future demand of this sector depends heavily on the satisfaction level of the consumers [9]. Health Insurance is a financial instrument which aides in utilization of health services at the time of medical exigency. In this section, the level of satisfaction of the households with respect to Health Insurance was assessed through their claim experience. Further a Factor analysis was done to identify the major factors leading to consumer satisfaction in consumption of Health Insurance services.

The proportion of money received as claim to total amount spent on hospitalization: The main purpose of purchasing a Health Insurance policy by a household is management of health security to meet unforeseen medical expenses. If the policyholders are able to claim these expenses, they may feel better off or satisfied with the Health Insurance provider. shows that 62.2 per cent of the respondents received the whole amount they spent on hospitalization. Roughly 23.3 per cent of the insured respondents received three-fourth of their medical bill and another 14.5 per cent of them received half the amount spent on hospitalization as claim. Claim experience of a large majority of the insured

respondents was inferred to be fairly good. Perception about Health Insurance policy: Satisfaction is a subjective phenomenon, so first-hand information about customer perceptions was taken from the respondents. They were asked to assess their Health Insurance policy as 'Highly useful', 'Useful to some extent', 'Useful' and 'Not at all useful'.

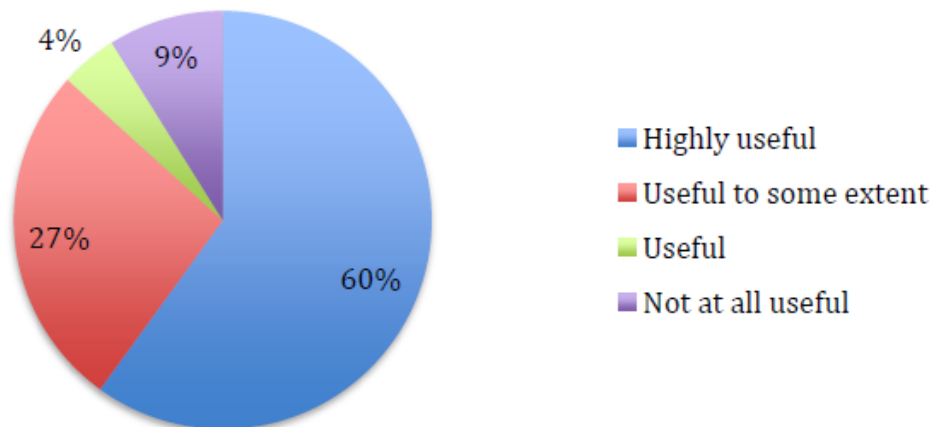


Figure 4. Perception about Policy

Figure .4. depict these perceptions and reveal that 60 per cent of the households who claimed their Health Insurance policy found the services to be highly useful' and 26 per cent of them found it useful to some extent'. The overall perception about Health Insurance policy was gauged to be good [10]. Chances of Renewal of Health Insurance Policy: Renewability of policy was considered as a measure of consumer satisfaction. It was theorized that if the respondents derive utility from the consumption of Health Insurance policy they would express their willingness to renew it. shows that out of the 90 insured respondents who were hospitalized, 72 per cent of them stated that they were 100 per cent sure of renewing their Health Insurance policy and another 12 per cent reported they had 50 per cent chances of renewal. Thus high chances of renewal of policy by the respondents implied higher satisfaction with their Health Insurance consumption. However a few responses related to feeling of cheating due to mis-selling of Health Insurance policies were also observed. About 8.9 per cent of the insured respondents reported that they felt cheated during their Health Insurance claim [11]. The rest 91per cent had no such negative feeling. It implies that services provided by the Health Insurance companies were fairly reliable. As far as filing cases of consumer grievances with Health Insurance policy servicing was concerned, only three respondents resorted to lodging a complaint of their claim disputes with the Health Insurance Company. One of them approached the Ombudsmen and two of them filed a complaint against the company in the consumer court. All the three indicators indicated a high level of satisfaction from the consumption of Health Insurance services. Furthermore, an effort was made to discern the underlying factors, which accounted for high level of customer satisfaction.

Implications

It is quite evident from the analysis that behaviour or attitude of staff of Health Insurance Company played a dominant role in customer satisfaction [12,13]. The courtesy and capability of staff to handle customer relationship during phone calls or request for change in paperwork relating to their policy can build a feeling of trust and reliability. An element of cooperation on the part of insurance agent in settlement of claims can enhance consumer satisfaction. Rude behaviour of agents can also drive the existing customers to discontinue their relationship with the company (Dror et al, 2016). Secondly choice of Health Insurance policy was also instrumental in achieving greater customer satisfaction. A judicious mix of policy attributes like premium rates, copayments and terms of renewability is required for success of this product. Customer satisfaction is the key to sustainability of service industry. For better future prospects of this sector, the insurers should catch up with dynamic changes in perception about this product [14]. The claim process should be made more convenient for the customer. Terms and conditions of Health Insurance plan should be made clear and transparent to the customer to avoid the feeling of mistrust.

Moral Hazard

Moral Hazard is a dominant issue in the Health Insurance sector. It signifies change in the health utilization behaviour of the individual due to enrolment in a Health Insurance plan. Arrow (1963, p. 961) opined that –insurance reduces the effective price of medical care, those insured would tend to use more health services (the moral hazard problem). Although individuals cannot perfectly predict their future demands, they are likely to have information about their health that could lead them to anticipate higher use of health services. He highlighted that the decisions to purchase Health Insurance and the utilization of health services are interrelated. Pauly (1968) also opined that Health Insurance often induces Moral Hazard so a national Health Insurance may not potentially be welfare increasing as it could result in an inefficient allocation of resources [15]. With constant costs and fixed demand curve for healthcare, he determined an optimum situation where marginal willingness to pay will be equal to marginal cost of care. He stated that a Health Insurance consumer would be paying low out of pocket expenses and would consume more units of healthcare. In this way, mandatory participation for Health Insurance could lead to wastage of funds.

The RAND Health Insurance Experiment was one of the landmark experiments conducted in U.S. in the 1970s, which confirm the existence of moral hazard in case of Health Insurance. A number of empirical studies have documented ex-post moral hazard in Health Insurance in both developed and developing country contexts (Asenso-Okeyere, 1998; Ekman, 2004; Harmon & Nolan, 2001; Sapelli & Vial, 2003; Yip & Berman, 2001). A few studies in India have also recognised the positive impact of Health Insurance on health utilization behaviour or presence of Moral Hazard. Aggarwal (2010) reported 6-7 per cent higher utilization rate for insured as compared to uninsured peers. Forgia and Nagpal (2012) in their study also pointed out that hospitalization rates were twice or thrice in case of private voluntary Health Insurance than the national average, and were suggestive of moral hazard. Prinja et al. (2017) acknowledged that the estimates of the rise in

health utilization in case of RSBY scheme ranged from 12.3 – 244 per cent for the insured. They also observed interstate disparities in the utilization behaviour[16]r. The increase in utilization was 15.3 per cent in Maharashtra and 244 per cent in Karnataka. For the State-specific insurance schemes, increase in utilization varied from 12.3 per cent in Karnataka's Vajpayee Arogyashri Scheme to 35.4 per cent for Comprehensive Health Insurance Scheme of Kerala. As Health Insurance in India largely provides financial protection against hospitalization and excludes OPD services, testing of moral hazard was done through testing of relationship between Health Insurance purchase and IPD health utilization.

Arrow (1963) stated that in case of medical insurance, there are two forms of moral hazard. First, an individual may spend less on preventive healthcare (ex ante). In this situation the insured individuals are alleged to make less effort to remain healthy and thus expose themselves to higher health risk. Second, the purchase of insurance induces an individual to utilize more services than otherwise (ex post). Both Ex post Moral Hazard and Ex ante Moral Hazard were tested in this study[17]. It was observed that wearing car seat belt was a regular habit of four fifth (79.4 percent) of the cases and 70 per cent of the cases reported the habit of frequently washing hands with soap. About 64.5 per cent discussed tips for healthy lifestyle; 62.4 per cent indulged in regular exercise and roughly. Others reported visiting their dentist every year and an eye doctor every two years; availing of diagnostic packages annually; avoiding smoking/alcohol; disease screening and staying up to date with immunizations and booster injections and. Thus it was observed that the sampled households undertook preventive health care measures in a big way. Most of the households were careful about their health probably due to good awareness level as expected from their good education status.

Empirical Findings and Interpretation of Results

The determinants of hospitalization derived from this model are explained as follows:

- *Family Size*: The coefficient of family size (.365) and had a odd ratio of 1.1440. It signified that other factors remaining constant, an increase of one member of the family increases the odds of hospitalization by 1.1440 times.
- *Health Insurance*: Enrolment in Health Insurance was a dominant factor (coefficient of 1.196) and increased the odds of health utilization by 3.308 times.
- *Monthly Medical Expenditure*: High medical expenditure is an indicator of prevalence of morbidity. An increase in one unit of medical expenditure was predicted to have 1.949 times higher chances of being hospitalized.
- *Health Status*: Health status had a negative sign of the coefficient with a value (.640), implying a poorer health status would lead to greater chances of hospitalization.

The four variables chosen by the Forward stepwise method displayed a -2 Log likelihood value of 394.581. Pseudo R square values of this model were computed to assess the degree of association of these variables with hospitalization. Results showed Cox & Snell R Square = .115 and Nagelkerke R Square = .168, signifying

that 16.8% of the variation in hospitalization was explained by the independent variables[18]. These were considered modest taking into account the categorical nature of variables. The model revealed that poor health status and high medical expenditure increase the likelihood of Hospitalization. It was evident that no socio-demographic factor other than Family Size influenced the probability of IPD health utilization [19,20]. However, the primary objective of the Logistic regression analysis was to study the association of Health Insurance purchase and hospitalization. The results in this model indicated positive impact of Health Insurance on hospitalization. It provided empirical evidence in favour of ex post Moral Hazard. Other empirical studies in India (Dror et al., 2005; Aggarwal, 2010; Hooda, 2015) supported the presence of Moral hazard. International studies (Manning et al., 1987; Liu et al., 2012; Bazie & Adimassie, 2017) were also supportive of existence of moral hazard.

Discussion

This paper analysed the Health Utilization behaviour of the respondents. It threw light on the pattern of health utilization of the 386 sampled households in Chandigarh and also examined the satisfaction level of respondents with respect to consumption of Health Insurance services. The paper focused on comprehending the behaviour of insured respondents viz-a-viz the uninsured and thereby assessed the presence of Adverse Selection and Moral Hazard in the sample. Pattern of health utilization amongst the sampled households revealed that nearly 56.21 per cent used OPD health services and preferred Allopathic treatment (84.7 per cent) to Homeopathic treatment (14.8 per cent) and Ayurveda treatment (11.1 per cent). Roughly 65.2 per cent of the OPD cases of utilization were reported in a private facility and the rest used public health facility. As far as IPD hospitalization was concerned, nearly four fifth (79 per cent) of the hospitalized respondents used the services of private hospitals. Thus there was dominance of private healthcare and Allopathic treatment in health utilization behaviour.

About 62.2 per cent of the insured respondents received the entire amount of the money they spent on hospitalization in form of claim and another 23.3 per cent of them received three fourth of their medical bill as claim. The insured respondents claimed hospitalization charges, ICU charges, maternity benefits and also pre-existing disease treatment costs. The level of satisfaction related to purchase of Health Insurance policy was found to be very high. Roughly 90 per cent of the respondents reported the policy to be 'useful' and 72 per cent of them expressed their willingness to renew their policy. Factor analysis was done to identify the latent factors behind this satisfaction level. Two factors emerged to be significant. The first factor 'Service behaviour' was correlated to aspects like capability of staff of insurance company to attend to customer needs in terms of documentation related to renewal of policies; alteration of nominations, address or mode of premium payment; claim settlement, so as to earn trust. The second factor that was deduced from the analysis was 'Product features', related to premium, policy features, less co-payment and services related to renewal of policy and delivery of policy documents. It implied that customers value the services offered by Health Insurance companies more than the product features including the premium they have to pay for it. Reliability or trust in provision of

healthcare services by any company has a strong bearing in the minds of consumer (Dror et al., 2016).

To assess Adverse Selection in the sample, the association between health risk and Health Insurance purchase was tested. Health risk of respondents was assessed with the help of three indicators-self assessed health status, long-term morbidity and monthly medical expenditure. Chi square test of independence revealed that no statistical significant association ($p > .05$) was found between Health Insurance purchase and health risk and also between health risk and sum assured of the policy. When '_hospitalization' in the past 365 days was considered as a variable of checking health condition of a respondent resembling the approach of Dutta & Husain (2013), the variable was not only statistically significant but its odd ratio in logistic regression model was also impressive. The coefficient of hospitalization was 1.482 and every episode of hospitalization increased the odd ratio of Health Insurance purchase by 4.4 times. So the sample exhibited signs of presence of Adverse Selection when the relationship between Health Insurance purchase and health status was judged with respect to episode of hospitalization. To check the presence of Moral Hazard, Chi Square test of independence and Logistic Regression analysis was used. The Chi square test revealed statistical significant ($p = .001$) association between Health Insurance purchase and IPD health utilization (Hospitalization). The Logistic model with '_Hospitalization' as dichotomous dependent variable (Yes=1, No=0) revealed that family size ($p = .001$), insurance status ($p = .001$), health status ($p = .005$) and medical expenditure ($p = .001$) were significant predictors of hospitalization. Thus households with more number of family members, subscription to Health Insurance, higher medical expenditure with poor health status, have higher chances of being hospitalized. Socio economic factors like age, sex, marital status, number of dependents, income, educational status and employment had no effect on hospitalization. The study confirmed the presence of Moral Hazard as relationship between Health Insurance purchase and hospitalization was found to be significant through Chi square test and Logistic Regression analysis.

Conclusion

This paper reveals that consumption of Health Insurance services led to high level of satisfaction among the insured households as it was instrumental in improving access to health services at the time of medical exigency. Churchill rightly said Health Insurance can be as a rational and powerful means that propels access to healthcare facilities significantly. It is regarded as a viable solution in terms of promoting efficiency and equity in the healthcare sector and also analyses the pattern of health utilization behaviour of the selected sample Households is done. It assesses the level of satisfaction of respondents regarding their Health Insurance policies and explores the factors, which affect it. A predictive model for estimating the factors affecting IPD health utilization is also described. Finally an empirical testing of the presence of Adverse Selection and Moral Hazard in the sample is done.

References

1. Ahlin, T., & Nichter, M., & Pillai, G. (2016). Health insurance in India: what do we know and why is ethnographic research needed, *Anthropology & Medicine*, 23:1, 102-124, DOI: 10.1080/13648470.2015.1135787.
2. Amaya, J. L., Ruiz, F., Trujillo, A. J., & Buttorff, C. (2016). Identifying barriers to move to better health coverage: preferences for health insurance benefits among the rural poor population in La Guajira, Colombia. *The International journal of health planning and management*, 31(1), 126-138.
3. Bhargava, S., Loewenstein, G., & Sydnor, J. (2018). *Do individuals make sensible health insurance decisions? Evidence from a menu with dominated options* (No. w 21160). National Bureau of Economic Research.
4. Cameron, A. C., & Trivedi, P. K. (1991). The role of income and health risk in the choice of health insurance: evidence from Australia. *Journal of Public Economics*, 45(1), 1-28.
5. Chithirai, S. & Shanmugapriya (2015). Rural policyholders' preference on health insurance, *Asian Journal of Management Research*, 5(4), 470 -480.
6. Cutler, D. M., Finkelstein, A., & McGarry, K. (2008). Preference heterogeneity and insurance markets: Explaining a puzzle of insurance. *American Economic Review*, 98(2), 157-62.
7. Dasgupta, R., Nandi, S., Kanungo, K., Nundy, M., Murugan, G., & Neog, R. (2013). What the good doctor said: A critical examination of design issues of the RSBY through provider perspectives in Chhattisgarh, India. *Social Change*, 43(2), 227-243.
8. Devadasan, N., Criel, B., Van Damme, W., Manoharan, S., Sarma, P. S., & Van der Stuyft, P. (2019). Community health insurance in Gudalur, India, increases access to hospital care. *Health policy and planning*, 25(2), 145-154.
9. Dixon, J. (2014). Determinants of Health Insurance Enrolment in Ghana's Upper West Region. Retrieved from <https://ir.lib.uwo.ca/cgi/viewcontent.cgi?article=3488&context=etd>.
10. Dror, D. M., Hossain, S. S., Majumdar, A., Koehlmoos, T. L. P., John, D., & Panda, P. K. (2016). What factors affect voluntary uptake of community-based health insurance schemes in low-and middle-income countries? A systematic review and meta-analysis. *PLoS One*, 11(8), <https://dx.doi.org/10.1371/journal.pone.0160479>
11. Polyakova, M. (2018). Risk selection and heterogeneous preferences in health insurance markets with a public option. *Journal of health economics*, 49, 153-168.
12. Prinja, S., Kaur, M., & Kumar, R. (2012). Universal Health Insurance in India: Ensuring equity, efficiency, and quality. *Indian Journal of Community Medicine*, 37(3), 142-149.
13. Sheth, K. (2017). The distributional consequences of micro health insurance: can a pro-poor program prove to be regressive? *Micro-insurance Innovation Facility, Research Paper*, 38, 1-29.
14. Sundari, M. M., Vidhyapriya, P., (2016) Changing Face of Indian Health Insurance Industry (With Special Reference with Chief Minister Comprehensive Health Insurance Scheme(CMCHIS)). *Asian Journal of Research in Social Sciences and Humanities*. 6, 310-326. doi : 10.5958/2249-7315.2016.00118.0.

15. Varghese, T. (2013). *Determinants of consumer purchase decisions of health insurance in Kerala*. (Unpublished Doctoral Dissertation). Cochin University of Science and Tecnology, Kerala.
16. Wagstaff, A., Lindelow, M., Jun, G., Ling, X., & Juncheng, Q. (2009). Extending health insurance to the rural population: an impact evaluation of China's new cooperative medical scheme. *Journal of health economics*, 28(1), 1-19.
17. Yellaiah, J., & Ramakrishna, G. (2018). Socio economic determinant of HI in India: the case of Hyderabad city. *International Journal of Development and Sustainability*, 1(2), 111-119.
18. Yip, W., & Berman, P. (2019). Targeted health insurance in a low income country and its impact on access and equity in access: Egypt's school health insurance. *Health Economics*, 10(3), 207-220.
19. Shetty, G. (2014). Health Insurance Evolution in India: An Opportunity to Expand Access. Cognizant 20-20 insights. Retrieved from <http://www.cognizant.ch/InsightsWhitepapers/Healthcare-Insurance-Evolution-in-India-An-Opportunity-to-Expand-Access.pdf> on March 16,2014.
20. Shahi, A. K., & Dr. Gill, H. (2013). Origin, Growth Pattern and Trends: A Study of Indian Health Insurance Sector. *Journal of Humanities And Social Science*, 12(3), 01-09.