

## **Analyse The Determinants Of Taking Health Insurance: Prospects And Challenges-A Study In Visakhapatnam Of Andhra Pradesh.**

**R. Ramu<sup>1\*</sup>, Prof. G. Nagaraja<sup>2</sup>**

<sup>1\*</sup>(Research Scholar, Department of Economics, Andhra University, Visakhapatnam-530003)

<sup>2</sup>(Professor, Department of Economics, Andhra University, Visakhapatnam-530003)

### **Abstract**

With a population of approximately 1.39 billion, India faces the challenge of low health insurance penetration despite its considerable manpower. While some may assume that raising awareness about health insurance would be straightforward in such a populous country, it remains one of the significant obstacles. Unlike the stringent regulations governing the purchase of motor insurance policies, health insurance is not mandatory, even though it plays a crucial role in ensuring prompt medical treatment. This article aims to delve into the issues surrounding health insurance awareness in Visakhapatnam district in Andhra Pradesh.

Keywords: Health Insurance, WHO, IRDP, APL, BPL, Health.

### **INTRODUCTION**

Health stands as the foundation of human progress, the bedrock of a life filled with abundance and prosperity. The adage "Health is Wealth" encapsulates this truth. Achieving excellent health isn't an overnight miracle; it's a gradual journey that demands time and various factors. For us, as individuals, and for those we cherish, health remains a daily priority. It's an indispensable asset regardless of age, gender, or social background. Poor health can impede education, work, familial duties, and community engagement. Thus, we're willing to make sacrifices for the promise of a healthier, longer life for ourselves and our loved ones. When we speak of well-being, it's often health that occupies our thoughts. Having good health is really important for everyone. It's one of our basic rights and it's all about living well and feeling good physically and mentally. This idea was set out in the 1946 World Health Organization Constitution. It's not just about not being sick, but it's about feeling great in body, mind, and in our connections with others. The 1948 Universal Declaration of Human Rights also says that being healthy is part of having a good life.

### **Importance of Insurance**

Life insurance indeed serves as a vital shield against the unpredictability of losing an earning member within a family. However, its benefits extend beyond this fundamental aspect. Some advantages directly impact individuals and their families, while others play a pivotal role in fostering economic development. For individuals, insurance provides a sense of security and confidence, shielding them from significant financial losses through minimal premium payments. In the commercial and industrial spheres, insurance enables smoother operations by transferring various risks to the insurer, thereby mitigating potentially large and uncertain losses.

In developed nations, government-sponsored social security schemes offer financial assistance to eligible citizens facing unemployment, old age, sickness, and disability, among other hardships. However, India's social security landscape has traditionally relied on family or community support. The shift toward industrialization, urbanization, and the breakdown of joint family systems has made institutionalized state-regulated social security arrangements imperative. Contrary to this necessity, the reality has revealed a lack of organized sector employment, leading to an influx of workers into the informal sector. The unorganized workforce grapples with fragmented employment, seasonal work, minimal job security, and inadequate legal protection. While the government does offer a few centrally funded social assistance programs such as the National Old Age Schemes and National Family Benefit Schemes, the coverage and benefits remain limited.

Moreover, in a country like India, where unemployment benefits aren't provided, the significance of insurance amplifies substantially. It fills a crucial gap in ensuring financial stability amid unforeseen adversities, offering a vital safety net in the absence of formal social security provisions for unemployment.

### **Importance of health insurance awareness**

Insufficient awareness about health insurance often results in individuals having to bear the financial burden of their medical expenses. While self-payment for medical treatment might seem commonplace, it can escalate into a significant problem if the associated bills strain one's finances. This challenge is exacerbated by the rising costs of medical

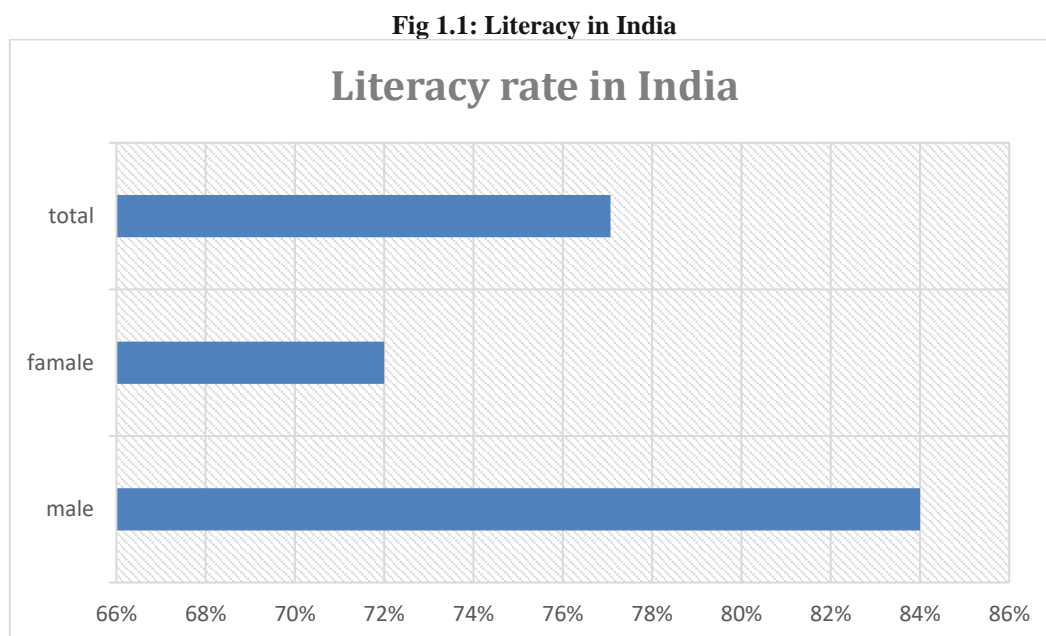
procedures Obtaining medical care for even routine procedures in a private hospital can require a substantial sum in the thousands of rupees. Selecting an appropriate health insurance plan becomes crucial in addressing this issue. Individuals have the option to enrol in government health schemes such as Arogya Sri, which offer comprehensive coverage at affordable premiums. This proactive step can help mitigate the financial strain associated with healthcare expenses and ensure access to quality medical treatment.

### **The major difficulties in spreading health insurance awareness in Developing Countries like India**

Apart from a large population and lack of reach, the following are the major challenges to health insurance awareness in India.

#### **1. Illiteracy**

As per the Ministry of Statistics & Programme Implementation's report, the literacy rate in India was recorded at 77.7% in the fiscal year 2020-21. Despite progress, a substantial segment of the Indian population remains without literacy. It is imperative to undertake additional efforts specifically tailored for individuals with limited education. Customized awareness programs should be developed to inform them about the role of health insurance in alleviating financial concerns when seeking healthcare services.



**Source:** Ministry of Statistics & Programme Implementation.

As illustrated by the chart, the challenge of illiteracy extends beyond rural areas and is also prevalent in urban segments. Consequently, both urban and rural populations grapple with issues related to illiteracy and a lack of awareness about health insurance.

#### **2 Deep-rooted misconceptions about health insurance:**

A prevailing misconception regarding the acquisition of health insurance is the notion that individuals in good health don't require it. The true gravity of its importance often becomes apparent only when confronted with a medical emergency. However, at that point, the waiting period clause of the insurance plan is triggered, giving rise to another widespread misconception concerning claim rejections.

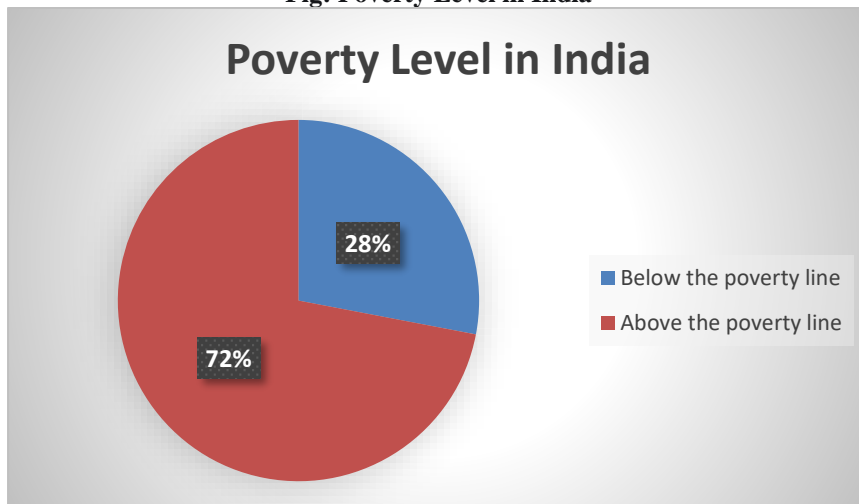
There exists a misguided belief that health insurance companies routinely deny most claims. In reality, health insurance claims are approved when they adhere to the stipulations outlined in the policy. The key lies in understanding and adhering to the terms and conditions of the insurance policy, dispelling the misconception surrounding frequent claim rejections

#### **3. Poverty**

According to the United Nations report, approximately 364 million people in India are estimated to be living below the poverty line, constituting nearly 28% of the country's population. This segment of society grapples with more

immediate and pressing challenges, such as insufficient access to food and sanitation. Consequently, allocating funds for health insurance may not rank high on their list of priorities.

**Fig: Poverty Level in India**



Source: United Nations report

Implementing free health insurance programs alongside the provision of quality medical facilities would prove beneficial. Such initiatives have the potential to enhance awareness and contribute to an overall improvement in health insurance penetration within the country.

#### **4. The state of public hospitals**

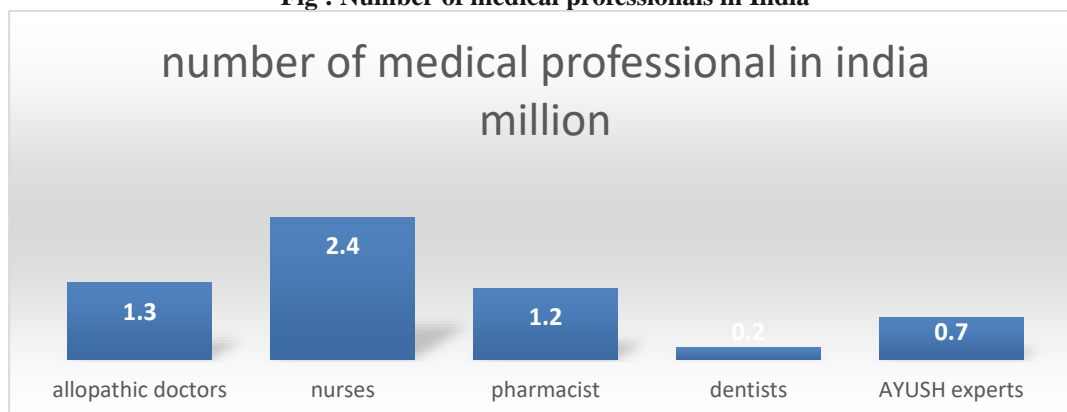
Public hospitals represent a crucial setting for amplifying health insurance awareness. Unfortunately, the lack of essential facilities has driven people to prefer private hospitals, despite the associated higher costs. Public hospitals, reliant on government funds for operation, often face inadequacies in financial support. Additionally, the swift evolution of medical technology, although promising, comes with substantial expenses. Consequently, public hospitals struggle to keep pace, falling behind in offering the latest medical treatments available to private counterparts.

To address these challenges, state-run health insurance awareness programs can play a pivotal role in educating the masses about the significance of health coverage. It becomes imperative for public hospitals to establish partnerships with local health insurance companies to ensure improved outreach, especially in areas lacking adequate medical facilities. This collaboration can facilitate a more comprehensive and accessible healthcare system, bridging the gap between awareness and practical healthcare solutions.

#### **5. Lack of healthcare professionals**

Healthcare workers serve as key catalysts in disseminating awareness about proper healthcare practices, including the significance of health insurance. With a sufficient number of healthcare professionals available to deliver medical services, these experts can actively contribute to educating patients about the importance of having health insurance coverage. Their direct interactions with patients provide valuable opportunities to convey information, address concerns, and promote a better understanding of the benefits associated with health insurance. By leveraging the expertise and outreach of healthcare workers, a more informed and health-conscious population can be cultivated, ultimately enhancing the overall awareness and appreciation for health insurance.

**Fig : Number of medical professionals in India**



Source: biomedcentral.com

According to the Economic Survey 2019-20, India's doctor-to-patient ratio is 1:1456, falling significantly short of the World Health Organization's (WHO) recommended ratio of 1:1000. This disparity underscores the challenges posed by a lower number of healthcare professionals. The ramifications of this shortage became pronounced during the COVID-19 pandemic, highlighting the strain on the healthcare system and the need for increased capacity to address public health crises effectively. Addressing this gap in the healthcare workforce is crucial for building resilience and ensuring better preparedness for future health challenges.

## 6. Free coverage under Group Plans

Organizations that prioritize their employees often provide complimentary health insurance plans to address their medical requirements. Many individuals rely on these corporate coverages, foregoing the purchase of a comprehensive policy that offers flexibility and personalized coverage. Employees may become insistent on obtaining coverage exclusively through such corporate plans, potentially overlooking government health schemes.

However, it's crucial to note that corporate plans do not provide lifetime validity. These policies terminate upon the cessation of employment, leaving former employees and their dependents vulnerable to potential medical liabilities. This underscores the importance of considering long-term individual health insurance options that ensure continued coverage beyond the duration of employment and provide a more comprehensive and sustainable approach to healthcare protection.

## The Impact of Lack of Awareness on Both the Economy and Individual:

The impact of a lack of awareness can be significant, affecting both the economy and individuals in various ways.

### A). On Economy:

- 1. Productivity Loss:** When individuals lack awareness about best practices, technologies, or efficient methods, productivity can suffer across industries. This leads to a slowdown in economic growth.
- 2. Innovation Constraints:** Lack of awareness about emerging trends, market demands, or technological advancements can hinder innovation. This, in turn, affects a country's competitiveness in the global market.
- 3. Resource Allocation Issues:** Without awareness about economic trends or market demands, businesses might misallocate resources. This can lead to overproduction, wastage, or investments in declining sectors, impacting overall economic stability.
- 4. Regulatory and Policy Challenges:** Insufficient awareness among policymakers about societal issues or economic challenges may result in ineffective policies or regulations, further impacting economic development.

### 2). On Individual:

- 1. Financial Consequences:** Lack of financial awareness can lead to poor financial decisions, debt accumulation, or inability to plan for the future. This affects individuals' financial stability and long-term well-being.
- 2. Health and Well-being:** Lack of awareness about health issues, preventive measures, or available healthcare resources can result in poor health choices, delayed treatments, or increased healthcare costs.
- 3. Career and Education:** Not being aware of educational opportunities, skill requirements, or career paths may limit an individual's ability to advance professionally, affecting earning potential and job satisfaction.
- 4. Social Impact:** Lack of awareness about social issues, diversity, or cultural differences can lead to misunderstandings, biases, or conflicts, affecting social cohesion and harmony. The impact of lack of awareness explains with help of tree chart.

**Figure: Impact of economy without lack of awareness**



One can argue that these financial challenges emerge when individuals are either covered by government insurance or have insufficient private insurance to meet their healthcare costs. This constitutes the core of my research problem, aiming to define health insurance in the broadest context. In this sense, I consider any financial arrangement that allows consumers to avoid cutting down on their healthcare spending when needed. This encompasses not only private health insurance but also free public provisions and reimbursements, where individuals prepay for healthcare through deductions from their salaries, can be viewed as forms of insurance.

## REVIEW OF EARLIER STUDIES

**Reshmi. B, et al., (2007)** their study focused on Health Insurance awareness in South India, analyzing determinants based on sociodemographic characteristics. Professionals showed a higher awareness of Health Insurance compared to other groups. The study concludes that middle and low socio-economic groups represent a potentially untapped market, as they are willing to invest a reasonable annual premium rather than face substantial medical expenses during adversities. Interestingly, these socio-economic groups showed a preference for government health insurance over private alternatives. The study suggests the government should formulate policies promoting widespread access to health insurance schemes. This strategy aims to reduce unnecessary out-of-pocket expenses and improve the utilization of healthcare facilities by encouraging public participation in health insurance initiatives.

**Tarun Chauhan, (2017)** The study aimed to assess the awareness levels of health insurance schemes among the urban unorganized sector and propose strategies to enhance awareness within this demographic, making health insurance more accessible and secure. It revealed three primary reasons for the lack of uptake: low income, lack of awareness about available schemes, and financial constraints. The study recommends that the government, through its health department, formulate policies ensuring that every unorganized worker becomes a member of the health insurance sector.

**Parisi Diletta et. al. (2023)** A study assessing the awareness of the Pradhan Mantri Jan Arogya Yojana (PM-JAY) in India found that 62% of eligible respondents were aware of the scheme, with 78% knowing they were eligible. Older respondents with higher education and salaried jobs were more likely to know about PM-JAY, while respondents from Meghalaya and Tamil Nadu had lower awareness. Other backward classes, wealthier socio-economic status, and those from Meghalaya or Gujarat were more likely to know their eligibility status. The study recommends implementing state-specific information dissemination approaches to empower beneficiaries to demand their entitled services.

## OBJECTIVES OF THE STUDY

1. To study the health care facilities and services among people of the study area.
2. To assess the socio-economic status of respondents in the study area.
3. To elicit the awareness and impact of health insurance scheme in the study area.

## MATERIALS AND METHODS

### 1. The Secondary Data:

This study is based on secondary data and primary data. The secondary data was collected from various sources such as the scheme website, available assessment reports, the Statistical Abstract of Andhra Pradesh published by the Directorate of Economics & Statistics Government of Andhra Pradesh, National Family Health Survey (NFHS), District Level Households and Facility Survey (DLHS), Census 2011 and other related government documents. **2. The Primary**

### Data:

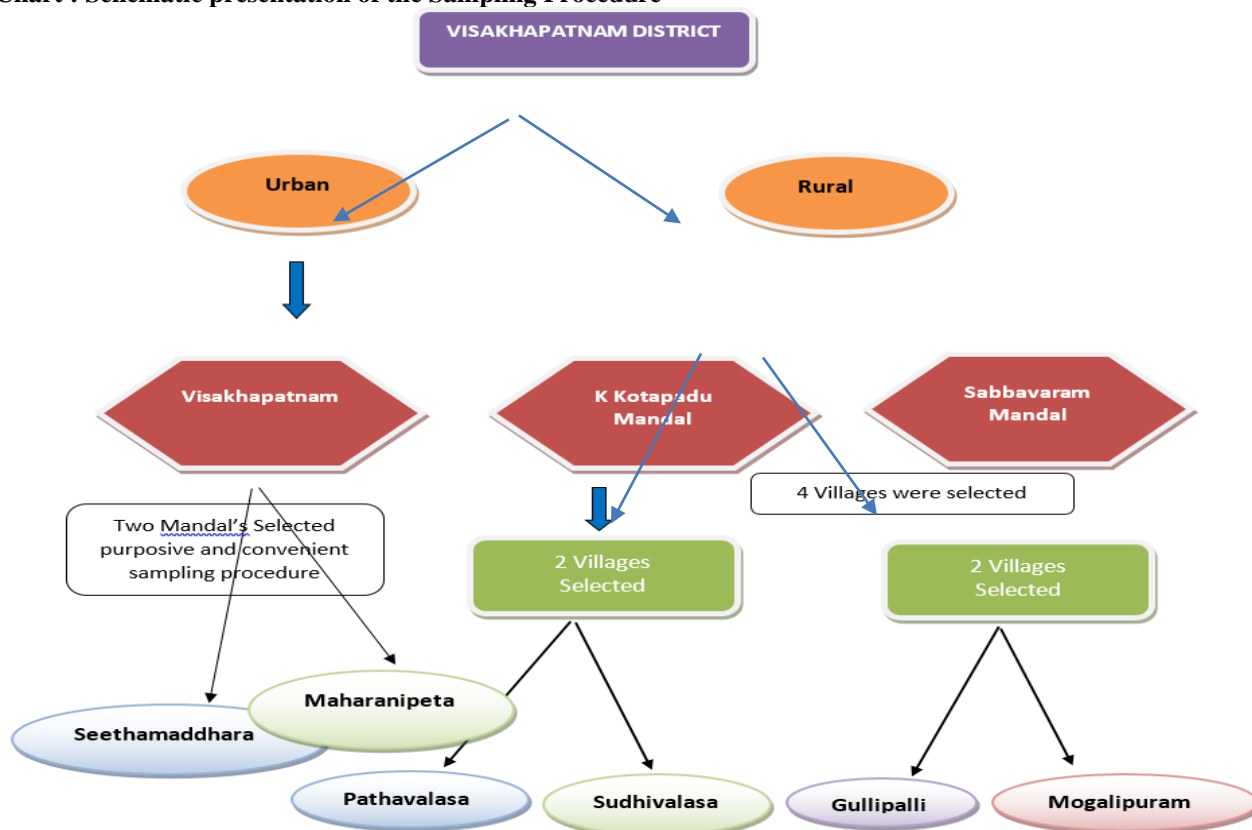
The Primary data was collected from the Visakhapatnam district. A Convenient sampling method was employed for village selection. A random sampling method was applied for data collection. During the survey, it was found that most people in the area knew about these insurance companies. The sample size is 312, the survey was conducted in three regions i.e., Urban, and rural areas of Visakhapatnam districts, out of 156 samples covered in urban areas, and 156 samples were collected from rural areas of the Visakhapatnam district. The samples were collected from the villages of Pathavalasa and Sudhivalasa of K Kotapadu Mandal and Gullipalli and Mogalipuram from Sabbavaram mandal of Visakhapatnam district for the rural sector, while the study of Seethamadhara and Maharanipeta from Visakhapatnam city covered in the present study.

## RESEARCH AREA

The research was set up in Andhra Pradesh's Visakhapatnam District, known for its diverse population comprising urban, and rural communities. This district is subdivided into four revenue divisions and comprises 64 revenue Mandal. Visakhapatnam, a district within the Andhra Pradesh State of India, spans an area of 11,161 km<sup>2</sup>, encompassing 10,528.84 km<sup>2</sup> of rural terrain and 632.16 km<sup>2</sup> of urban spaces. In 2011, its population was recorded at 4,290,589 individuals, with 2,035,922 residing in urban areas and 2,254,667 in rural zones, resulting in a population density of 384.4 people per square kilometer. The district boasts approximately 10, 97,042 houses, with 5, 17,625 in urban areas and 5, 79,417 in rural regions, spread across its 3,072 villages.

The research employed a convenient sampling method for village selection and a random sampling technique for data collection. Throughout the survey, it became evident that a significant portion of the local population was aware of these insurance companies. The sample size consisted of 312 individuals, with 156 samples gathered from urban areas, and 156 from rural zones within Visakhapatnam district. The samples have been collected from 4 villages of rural and 2 are urban areas of Visakhapatnam district. Specifically, samples were collected from Pathavalasa and Sudhivalasa villages in K Kotapadu Mandal and Gullipalli and Mogalipuram from Sabbavaram mandal of Visakhapatnam district for the rural sector, while the study also encompassed Visakhapatnam city in its exploration of urban regions of Seethamadhara and Maharanipeta.

**Chart : Schematic presentation of the Sampling Procedure**



### Statistical tools

To study the objectives health care facilities available in rural and urban areas and health insurance facilities, simple ratios and percentage, regression methods are used.

#### 1. Dependent variable - Health insurance purchase

#### 2. Independent variables

- Area (X1)
- Education Level (X2)
- Occupation (X3)
- Health expenditure (X4)
- Annual Income (X5)
- Awareness of Health insurance scheme (X6)
- Alcohol consumption (X7)
- Age (X8)
- Dependency (X9)

In order to study the Determinants of Demand for Health Insurance in Visakhapatnam district in Andhra Pradesh State the above variables will be used. The data statistical analyses done through MS-Excel and SPSS Software

#### 3. Specification of the Model

To examine factors determining the demand for health insurance, a logit model will be used in the analysis of individual household's choice between purchased health insurance and not purchased health insurance. The model uses health insurance purchased among the households as the dichotomous dependent variable. The model uses various households as the factors influencing health insurance purchased.

$$P_i = E\left(Y = \frac{1}{x_i}\right) = 1 / 1 + e^{-(b_1 + \sum b_k x_{ik})}$$

Pi = Probability that health insurance Purchase, b1 = constant term, bk = coefficients

Xk = for k = 1....9, are the independent variables and subscript i denotes i th Observation.

## SCOPE OF THE STUDY

The research focuses solely on the former Visakhapatnam district. It aims to examine the factors influencing health insurance coverage offered by both private and public companies across urban, and rural areas. However, this study does not encompass topics such as healthcare measures involving nutrition supplements, hygiene, or preventive actions.

## SIGNIFICANCE

This study holds significance in providing valuable insights into the current state of health insurance awareness in Visakhapatnam District, contributing to the development of targeted interventions and educational campaigns. Ultimately, the findings aim to empower individuals to make informed choices regarding their healthcare coverage.

## RESULTS AND DISCUSSIONS

The demographic profile of the study area depicted in the following Table

**Table 1: Demographic Profile of the Sample Respondents**

Demographic Variable	Dominant group	Total (%)
Gender	Male	259 (83.01)
	Female	53 (16.99)
Age	20-30	78 (25.00)
	30-40	124 (39.74)
	40-50	80 (25.64)
	50-60	24 (7.69)
	Above 60	6 (1.92)
Marital Status	Single	71 (22.76)
	Married	241 (77.76)
Education	Never went to school	52(16.66)
	School	138(44.23)
	Under Graduate	83(26.60)
	Post Graduate	39(12.51)
Occupation	Government	44 (14.10)
	Private employee	85 (27.24)
	Farmer	63 (20.19)
	Business	59 (18.91)
	Daily wage labour	61(19.55)
Annual Income	<Rs.50,000	27 (8.65)
	Rs.50000 – Rs.100000	77 (24.68)
	Rs.100001 – Rs.200000	20 (6.41)
	Rs.200001 – Rs.300000	54 (17.31)
	Rs.300001 – Rs.400000	44 (14.10)
	Rs.400001 – Rs.500000	46 (14.74)
	Rs.500001 – Rs.600000	20 (6.41)
	Rs.600001 – Rs.700000	
	Rs.700001 – Rs.800000	9(2.96)

Table 1 shows that majority (89.18%) of the respondents were male. 40.98 % of the respondents in the age group of 20 - 30. Majority of the respondents were married. Most of the respondent's educational status are schooling. 60% of respondents are private employees with less than Rs.500000 as annual income. The logistic regression output presented in the folloing table.

**Table: Logistic regression- Coefficient of the model**

Regression Number of observations				312
LR chi2(9)				518.28
Prob > chi2				0.0000
Pseudo R2				0.7377
Log likelihood				-26.678846
Have insured	Coef.	Std. errs.	z	Odds Ratio
Area	-0.0001158*	0.0000258	-6.44	0.9998342



Education level	2.636249**	0.6077639	4.34	13.96073
Occupation	1.664647*	0.9702826	1.72	5.283808
Medical expenditure	0.000158*	0.0000331	4.76	1.00158
Annual Income level	0.0002991*	0.0000866	3.45	1.000299
Awareness HIS	12.64628*	3.609436	3.50	310607
Alcohol	-2.661796	1.894366	-1.41	.0698227
Age	0.2767	0.4010	0.69	1.318895
Dependency	-1.1296	0.4689677	-0.78	0.3231409

Table seems to present findings from a logistic regression model, showcasing significant statistics. The LR chi2 (9) value of 518.28 signifies a strong relationship between variables, supported by the associated p-value of 0.0000, indicating the model's overall significance. Additionally, the Pseudo R2 value of 0.7377 denotes a high explanatory power, indicating the model's effectiveness in explaining the outcome's variance.

The overall model demonstrates statistical significance (Prob > chi2 = 0.0000), suggesting the relationship between predictor variables and the outcome. Variables like "Area," "Education Level," "Occupation," "Medical Expenditure," "Annual Income Level," and notably, "Awareness HIS" show considerable impact on the outcome. However, variables such as "Alcohol," "Age," and "Dependency," although seemingly influential, possess a high standard error, indicating uncertainty regarding their impact on the outcome.

It seems that for the mentioned logistic regression model, the coefficient interpretation revolves around the odds ratio and the impact of independent variables on the likelihood of purchasing health insurance. The odds ratio (P/1-P) signifies the change in the likelihood of purchasing health insurance concerning a unit change in the independent variable. In this scenario, changes in income, assets, health expenditure, total household expenditure, and awareness of the household appear to positively influence the odds ratio, indicating a favorable impact on purchasing health insurance. However, the other variables in the model don't show statistical significance, suggesting they may not significantly impact the likelihood of purchasing health insurance.

It appears that the effects of the aforementioned variables like education level, occupation, annual income, health expenditure, and awareness on health insurance purchase are statistically significant and exhibit a positive influence. However, the variable representing the area seems to have a negative impact on health insurance purchase. On the other hand, variables like alcohol, age, and dependency show the expected directional influence but lack statistical significance.

To investigate potential interrelationships among the independent variables, multi-collinearity was assessed and found to be below 0.5 in all cases, indicating a low degree of correlation among these predictors. In models like logistic regression, R2 isn't typically considered relevant, hence the completion of pseudo R2 values, which serve as suitable measures of model fit and explanatory power.

### Case study:

V Somesh, aged 43 years, from Seethamadhara in Visakhapatnam urban. He is business individual. He stated that the below poverty people having Aarogya Sri health scheme, employees having health insurance scheme and private employees also having ESI health insurance whereas our business people doesn't have any specific Government supported health insurance scheme. We are also required health insurance scheme for citizen of this country.

### CONCLUSIONS

The study revealed that majority (89.18%) of the respondents were male. 40.98 percent of the respondents in the age group of 20 -30. Majority of the respondents were married. Most of the respondent's educational status are schooling. 60% of respondents are private employees with less than Rs.500000 as annual income. The logit regression model demonstrates that statistical significance (Prob > chi2 = 0.0000), suggesting the relationship between predictor variables and the outcome. Variables like "Area," "Education Level," "Occupation," "Medical Expenditure," "Annual Income Level," and notably, "Awareness HIS" show considerable impact on the outcome. However, variables such as "Alcohol," "Age," and "Dependency," although seemingly influential, possess a high standard error, indicating uncertainty regarding their impact on the outcome.

### REFERENCES

1. Reshmi, B., Nair, N. S., Sabu, K. M., & Unnikrishan, B. (2007). Awareness of health insurance in a south Indian population: A community-based study. *Health Popul Perspect Issues*, 30(3), 177-188.

2. Chauhan, T. (2017). A study to assess the awareness level about government recognized health insurance schemes among the urban unorganized sector in East Delhi. *Imp J Interdiscip Res*, 3, 8.
3. Parisi Diletta, Swati Srivastava, Divya Parmar, Christoph Strupat, Stephan Brenner, CaitlinWalsh, Rupak Neogi, Sharmishtha Basu, Susanne Ziegler, Nishant Jain and Manuela De Allegri (2023). Awareness of India's national health insurance scheme (PM-JAY): a cross-sectional study across six states. *Health Policy and Planning*, 38, 2023, 289–300 DOI: <https://doi.org/10.1093/heapol/czac106>.