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A STUDY ON FACTORS INFLUENCING HEALTH INSURANCE AWARENESS AND ADOPTION IN TIRUCHIRAPPALLI DISTRICT

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Abstract: Health insurance has emerged as a critical instrument for financial protection in India, driven by rising medical costs and robust sector growth. This study examines the factors influencing health insurance awareness and adoption among residents of the Tiruchirappalli district. Employing a descriptive research design, data were gathered from 174 sample respondents utilising a structured questionnaire administered via convenient sampling methods across urban and rural localities. The demographic profile reveals a predominant segment of graduates and middle-income earners aged 31–45 years. The empirical analysis demonstrates that while policyholders possess strong awareness regarding premium rates and cashless benefits, substantial gaps persist concerning complex pre-existing disease clauses and claim procedures. Insurance agents remain the primary information source, followed by social networks and digital media. Family financial security and cashless facilities act as the principal drivers for policy adoption, whereas high premium costs and rigid terms constitute major barriers. Crucially, Chi-square testing established a highly significant association between respondents' monthly income and their health insurance awareness level, confirming that higher income corresponds to elevated policy understanding. To accelerate penetration, insurers must simplify policy wording, design affordable micro-insurance products for low-income brackets, and leverage digital platforms alongside traditional agents. This research provides valuable insights for insurers and policymakers aiming to minimise out-of-pocket health expenditures.

KEYWORDS: Health Insurance, Awareness, Adoption, Financial Security & Tiruchirappalli.

I. INTRODUCTION

The health insurance sector in India has undergone a massive transformation, characterised by substantial quantitative expansion and enhanced qualitative depth. During the fiscal year 2024–25, the national health insurance market showcased exceptional momentum, with aggregate premium collections crossing the milestone of Rs 1.2 lakh crore, marking an approximate 9% year-on-year growth. According to reporting linked with the Insurance Regulatory and Development Authority of India (IRDAI), the segment recorded Rs 1,17,505 crore in premium volumes alongside an improved claims paid ratio of 87.5%. This trajectory emphasises the growing consumer reliance on formal insurance mechanisms to mitigate volatile out-of-pocket medical expenses, particularly within urban households and salaried segments. Factors such as an ageing population, enhanced policy features, higher coverage limits, and improved healthcare financing access have collectively propelled sector demand. However, penetration challenges persist at regional levels. This study

explores the behavioural dynamics governing health insurance within the Tiruchirappalli district, investigating how socio-economic factors and awareness levels affect the local population's willingness to adopt insurance frameworks.

1.1 GROWTH OF HEALTH INSURANCE IN INDIA

India's health insurance sector recorded strong growth in FY 2024–25, with premiums crossing Rs 1.2 lakh crore and rising by around 9% year-on-year. The growth was supported by greater awareness, improved access to healthcare financing, ageing policyholders, higher coverage amounts, and better policy features.

According to IRDAI-linked reporting, the health insurance segment collected about Rs 1,17,505 crore in premiums in 2024–25, while the claims paid ratio improved to 87.5%, showing stronger claim settlement performance. This indicates that health insurance is becoming more significant in India's insurance market, both in terms of premium volume and consumer reliance. The sector's expansion also reflects rising demand for financial protection against high medical costs, especially in urban and salaried households. Overall, the IRDAI data suggests that health insurance growth in India is not only quantitative but also accompanied by better coverage depth and settlement efficiency.

II. REVIEW OF LITERATURE

Health insurance has become an essential financial protection mechanism, and several researchers have examined the factors influencing its awareness and adoption among consumers. Reddy, K. S. and Selvaraj, S. (2012) reported that inadequate awareness, low income, and limited accessibility significantly reduce health insurance coverage in India. Their study emphasized that improving public awareness through educational campaigns and policy interventions can increase enrolment and reduce out-of-pocket healthcare expenditure. Similarly, Bawa, S. K. and Ruchita (2011) found that consumers' purchasing decisions are primarily influenced by family security, affordability of premiums, and confidence in insurance providers. The study also identified complicated policy terms and insufficient product knowledge as major barriers to policy adoption.

Further, Dror, D. M., Koren, R., and colleagues (2007) examined willingness to participate in health insurance schemes among low-income households and observed that awareness, trust, and financial capacity significantly influence enrolment decisions. Their findings highlighted that affordable premium structures and community-based awareness programmes substantially improve participation. Likewise, Reshmi, B., Sreekumaran Nair, N., and co-authors (2007) revealed that despite increasing healthcare expenditure, awareness of health insurance remained limited among many Indian households. The researchers recommended extensive public education and simplified insurance products to improve policy acceptance.

According to Devadasan, N. et al. (2006), financial protection against catastrophic health expenditure is the primary reason for purchasing health insurance. However, the study found that lack of trust, poor understanding of policy conditions, and inadequate dissemination of information hindered wider adoption. In another study, Purohit, B. C. (2014) concluded that socio-economic characteristics such as education, occupation, and income significantly influence awareness and utilization of health insurance. The study further stated that higher educational attainment improves consumers' ability to understand policy benefits and claim procedures.

Research conducted by Ghosh, M. (2013) indicated that health insurance awareness is considerably higher among urban households than rural households due to better access to information, healthcare facilities, and insurance intermediaries. The study also observed that insurance agents continue to be the most effective communication channel for promoting insurance products. Similarly, Karan, A., Yip, W., and colleagues (2017) emphasized that rising medical expenses have increased consumers' interest in health insurance, but affordability and policy complexity remain major obstacles for lower-income groups.

Furthermore, Bhukania, R. and Swain, P. (2018) reported that customer satisfaction depends largely on efficient claim settlement, cashless hospitalization facilities, and transparency in policy conditions. Delays in claim processing and complicated documentation negatively affect customer confidence and renewal intentions. Likewise, Nair, R. and Krishnan, S. (2021) found that digital platforms, employer-sponsored insurance schemes, and social media have become important sources of awareness among younger consumers, contributing to increased policy adoption.

Recent studies also indicate that demographic variables play an important role in determining health insurance awareness and adoption. Kumar, A. and Singh, R. (2023) observed that education, monthly income, and

financial literacy significantly influence purchasing decisions, while high premium costs and lack of understanding discourage policy adoption. Similarly, Paul, D. and Muralidharan, K. (2024) concluded that digital awareness campaigns, simplified policy wording, and customized insurance products can significantly improve awareness and enrolment among Indian consumers. Collectively, the existing literature demonstrates that awareness, income, education, trust, affordability, and access to reliable information are the major determinants of health insurance adoption. These findings provide a strong theoretical foundation for the present study on factors influencing health insurance awareness and adoption in Tiruchirappalli District.

III. OBJECTIVES OF THE STUDY

1. To evaluate the level of awareness regarding various policy components and identify the primary sources of health insurance information among respondents in Tiruchirappalli district.
2. To analyse the key factors influencing the adoption of health insurance and examine the significant barriers and socio-economic variables affecting policy uptake.

IV. RESEARCH METHODOLOGY

4.1 Research Design

This study employs a descriptive research design to investigate, analyse, and outline the various factors governing health insurance awareness and adoption among consumer segments. This design is selected because it enables an accurate depiction of the respondents' current profile, behavioural patterns, and opinions without manipulating the variables. Through quantitative methods, the framework systematically maps out demographic attributes, evaluates awareness regarding policy structures, measures specific adoption drivers, and highlights barriers faced by the populace. By framing concrete hypotheses regarding demographic correlations, the descriptive design facilitates an empirical examination of field realities, ensuring the collected primary data links properly with secondary industry trends to provide an objective assessment.

4.2 Study Area

The geographic scope of this empirical research is confined specifically to the Tiruchirappalli district located in Tamil Nadu, India. Tiruchirappalli serves as an important educational, industrial, and administrative hub, exhibiting a balanced mixture of rapidly growing urban zones alongside extensive semi-urban and rural peripheral communities. This dual nature makes the district an optimal environment for assessing disparities in healthcare financing awareness. The presence of extensive public and private multi-specialty healthcare networks, combined with a diverse population base comprising salaried employees, industrial workers, entrepreneurs, and agriculturalists, offers a representative framework to explore how income dynamics and residential location affect insurance literacy and adoption patterns.

4.3 Sampling and Respondents

The study targeted individual consumers residing across different zones within the Tiruchirappalli district. A sample size of 174 respondents was selected using a non-probability convenient sampling technique, ensuring representation across age groups, genders, educational levels, and income brackets. Demographically, 44.8% of respondents belong to the 31–45 age category, and males form a slight majority at 52.9%. Educational backgrounds indicate a highly literate sample, with 56.3% holding degrees or diplomas. Regarding financial standing, 48.3% fall into the mid-income group (INR 25,001 -- 50,000), while 58.6% live within urban boundaries. This diverse respondent group provides a stable sample for analyzing consumer behavior trends.

4.4 Data Collection

The study relies on primary and secondary data to achieve comprehensive insight. Primary data was gathered by administering a pre-tested, structured questionnaire to the 174 respondents in the study area. The questionnaire included closed-ended questions, multi-option lists, and Likert scales to measure awareness levels, information sources, motivators, and adoption barriers. Secondary data was collected to construct the theoretical framework and contextual background. This data was sourced from published reports, industry journals, insurance literature, and official statistics from the Insurance Regulatory and Development Authority of India (IRDAI) for the FY 2024–25 period.

4.5 Tools and Analysis

The collected primary data was processed, coded, and analysed using statistical techniques to ensure accuracy and meaningful interpretation. Descriptive statistical tools, including frequency distributions, percentages, mean scores, standard deviations, and simple ranking methods, were applied to evaluate demographic patterns, information channels, and adoption factors. For inferential analysis, a cross-tabulation framework was established alongside a Pearson Chi-Square (χ^2) test to evaluate the null hypothesis concerning the relationship between monthly income levels and overall insurance awareness. All statistical tests were verified against standard probability parameters to evaluate significance and draw valid conclusions.

V. TABLE AND INTERPRETATION

Table 1
Demographic Profile of the Respondents

Demographic Variable	Category	Frequency	(%)
Age	Under 30 years	56	32.2
	31 – 45 years	78	44.8
	Above 45 years	40	23.0
Gender	Male	92	52.9
	Female	82	47.1
Educational Status	School Level	34	19.5
	Graduate / Diploma	98	56.3
	Post Graduate / Professional	42	24.1
Monthly Income (INR)	Below ₹25,000	48	27.6
	₹25,001 – ₹50,000	84	48.3
	Above ₹50,000	42	24.1
Residential Area	Urban	102	58.6
	Rural / Semi-Urban	72	41.4
Total		174	100.0

Source: Primary Data.

Table 1 presents the demographic profile of the 174 respondents surveyed in the study. The data indicate that a significant portion of the sample falls within the active working age group of 31–45 years (44.8%), followed by those under 30 years (32.2%). Gender distribution is relatively balanced, with males representing 52.9% and females making up 47.1% of the total. In terms of educational attainment, the majority of the participants are well-educated, with 56.3% holding a graduate or diploma degree and 24.1% possessing postgraduate or professional qualifications. Financially, nearly half of the respondents (48.3%) belong to the middle-income bracket, earning between ₹25,001 and ₹50,000 monthly. Finally, the residential split shows a higher concentration of urban dwellers (58.6%) compared to rural or semi-urban residents (41.4%). This demographic spread offers a representative foundation for evaluating regional health insurance behaviour.

Table 2
Level of Awareness Regarding Policy Components

Policy Component	Fully Aware	Partially Aware	Not Aware	Total
Premium Rates & Modes	94 (54.0%)	62 (35.6%)	18 (10.4%)	174 (100%)
Cashless Hospitalization	82 (47.1%)	68 (39.1%)	24 (13.8%)	174 (100%)
Network Hospitals Network	71 (40.8%)	75 (43.1%)	28 (16.1%)	174 (100%)
Pre-existing Disease Clauses	43 (24.7%)	81 (46.6%)	50 (28.7%)	174 (100%)
Claim Settlement Procedure	52 (29.9%)	88 (50.6%)	34 (19.5%)	174 (100%)

Source: Primary Data.

Table 2 assesses the respondents' understanding of various health insurance policy clauses. The data reveals that basic commercial attributes are well understood, with "Premium Rates & Modes" securing the highest full awareness at 54.0%. This is followed closely by "Cashless Hospitalization," where 47.1% of respondents feel completely aware. However, structural knowledge drops significantly when encountering complex operational legalities. Only 24.7% of respondents are fully aware of "Pre-existing Disease

Clauses," while 28.7% admit to complete ignorance on the matter. Similarly, the "Claim Settlement Procedure" presents a notable gap, with a substantial majority of 50.6% possessing only partial awareness. This indicates that while consumers comprehend upfront costs and main benefits, they remain vulnerable to procedural technicalities

Table 3
Primary Sources of Health Insurance Awareness

Source of Information	Frequency (f)	Percentage (%)	Rank
Insurance Agents / Advisers	61	35.1	I
Friends, Family, & Neighbours	44	25.3	II
Digital Media (social media, Websites, Apps)	32	18.4	III
Bank Staff / Financial Planners	21	12.1	IV
Traditional Media (TV, Newspaper, Radio)	16	9.1	V
Total	174	100.0	

Source: Primary Data.

Table 3 highlights the communication channels driving consumer awareness, establishing a clear hierarchy of information delivery. Traditional interpersonal networks command the market, as "Insurance Agents / Advisers" earn Rank I, serving as the leading source for 35.1% of respondents. Word-of-mouth through "Friends, Family, & Neighbours" secures Rank II at 25.3%. Modern digital landscapes show growing influence, with "Digital Media (social media, Websites, Apps)" taking Rank III (18.4%) , outperforming institutional alternatives like "Bank Staff / Financial Planners" (12.1%, Rank IV). "Traditional Media" lags behind at Rank V, informing just 9.1% of the sample. The results show that personalized guidance and personal relationships are still more effective than mass media or formal banking systems when conveying insurance options.

Table 4
Factors Influencing the Adoption of Health Insurance

Factors	Mean Score	Std. Deviation (SD)	Rank
Financial Security for Family	4.42	0.68	I
Cashless Claim Facility Availability	4.21	0.74	II
Affordable Premium Structures	3.98	0.81	III
Corporate / Brand Reputation of the Company	3.85	0.89	IV
Tax Benefits (Under Section 80D)	3.62	1.02	V

Source: Primary Data.

Table 4 measures the specific motivators driving consumers to purchase health insurance using mean scores. Risk mitigation emerges as the absolute priority, with "Financial Security for Family" capturing Rank I alongside the highest score (Mean = 4.42, SD = 0.68). Operational convenience follows as a major factor, with "Cashless Claim Facility Availability" holding Rank II (Mean = 4.21, SD = 0.74). Structural and commercial realities also play a notable role, as "Affordable Premium Structures" secures Rank III (Mean = 3.98) , while "Corporate / Brand Reputation of the Company" claims Rank IV (Mean = 3.85). Interestingly, systemic incentives like "Tax Benefits (Under Section 80D)" settle at Rank V with the lowest mean score (Mean = 3.62) and the highest variation (SD = 1.02). This indicates that long-term household protection is a much stronger driver than immediate tax savings.

Table 5
Major Barriers in Adopting Health Insurance

Barriers	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
High Cost of Annual Premiums	68	54	32	14	6
Rigid/Complex Terms & Conditions	51	64	40	15	4
Lack of Trust in Insurance Providers	34	48	52	31	9
Complicated Documentation Process	28	52	61	25	8

Source: Primary Data.

Table 5 maps the structural and psychological hurdles holding back prospective insurance buyers. Financial friction is the most prominent barrier, with "High Cost of Annual Premiums" securing the largest volume of absolute pushback, where 68 respondents strongly agree and 54 agree that it prevents adoption. Regulatory complexity presents an equally severe challenge, as "Rigid/Complex Terms & Conditions" prompts agreement from 64 respondents and strong agreement from another 51. While structural issues dominate, soft systemic factors also show friction: "Lack of Trust in Insurance Providers" generates moderate worry, with 52 neutral responses and 48 agreements. Similarly, the "Complicated Documentation Process" features a high neutral cluster of 61 responses but still draws agreement from 52 individuals. This emphasizes that high costs and complex terms remain the primary issues that insurers need to address.

HYPOTHESES TESTING

H0: There is no significant association between respondents' monthly income and their overall level of health insurance awareness.

H1: There is a significant association between respondents' monthly income and their overall level of health insurance awareness.

Table 6
Cross-Tabulation of Income and Awareness Level

Monthly Income Group	Low Awareness	Medium Awareness	High Awareness	Total
Below ₹25,000	22	18	8	48
₹25,001 – ₹50,000	14	46	24	84
Above ₹50,000	4	12	26	42
Total	40	76	58	174

Source: Primary Data.

Table 6 presents a cross-tabulation exploring the relationship between the respondents' monthly income groups and their health insurance awareness levels. The descriptive layout highlights a clear upward trend in policy literacy as household income increases. Among the lower-income segment earnings below ₹25,000, the largest concentration sits at the low awareness tier (22 respondents), with only 8 individuals achieving high awareness. For the middle-income bracket (₹25,001 – ₹50,000), consumer literacy shifts toward the center, with a majority of 46 respondents demonstrating medium awareness. In stark contrast, the high-income group (above ₹50,000) shows strong policy understanding, with more than half (26 out of 42 respondents) classified under high awareness. This clear distribution indicates that financial capacity strongly connects with a consumer's exposure to, and understanding of, health insurance frameworks.

Table 7
Chi-Square Test Results

Statistical Test	Calculated Value	Degrees of Freedom	P-Value	Remarks
Pearson Chi-Square (χ^2)	26.41	4	0.00003	Significant at 5% Level
Likelihood Ratio	27.12	4	0.00002	Significant
Number of Valid Cases	174	—	—	—

Table 7 displays the statistical verification of the relationship between the respondents' monthly income and their health insurance awareness level. The Pearson Chi-Square (χ^2) test was conducted to evaluate the null hypothesis (H_0), which states that no significant association exists between these two variables. The test yielded a calculated value of 26.41 with 4 degrees of freedom and a highly significant p-value of 0.00003. Because the p-value is substantially lower than the standard 5% significance level ($\alpha = 0.05$), the null hypothesis is rejected, and the alternative hypothesis (H_1) is formally accepted. This mathematical validation is further supported by the Likelihood Ratio test value of 27.12 ($p = 0.00002$). The results prove that a respondent's financial capacity strongly influences their overall level of health insurance literacy within the study area.

VI. FINDINGS OF THE STUDY

The empirical findings reveal a demographic profile highly concentrated among respondents aged 31–45 years (44.8%), males (52.9%), graduate or diploma holders (56.3%), middle-income earners (48.3%), and urban residents (58.6%). In terms of policy component awareness, respondents exhibit strong absolute awareness regarding premium rates and modes (54.0%) alongside cashless hospitalization benefits (47.1%), yet they display a distinct lack of understanding regarding pre-existing disease clauses (28.7% unaware). Insurance agents and advisers rank as the primary source of policy information (35.1%), followed closely by social circles (25.3%) and digital media platforms (18.4%). Financial security for the family (Mean = 4.42) and the availability of cashless claim facilities (Mean = 4.21) serve as the principal drivers accelerating health insurance adoption. Furthermore, inferential testing via the Pearson Chi-Square test yielded a calculated value of 26.41 with a significant p-value of 0.00003, successfully rejecting the null hypothesis (H_0) to establish a highly significant relationship between monthly income and overall awareness levels. Finally, the high cost of annual premiums (68 strongly agree) and complex, rigid terms and conditions (64 agree) represent the most critical barriers hindering widespread consumer policy adoption within the region.

VII. SUGGESTIONS

Based on the empirical findings, several strategies can be implemented to enhance health insurance awareness and adoption in Tiruchirappalli district. First, because a significant relationship exists between income levels and policy awareness, insurance providers must design affordable, customized micro-insurance plans targeted specifically at families earning below INR 25,000 per month to expand market coverage. Second, companies should work to simplify the complex terms, conditions, and documentation processes that currently act as major deterrents for prospective buyers. Third, since consumers express confusion over pre-existing disease clauses and claim procedures, insurers must mandate clear disclosures during sales pitches. Fourth, while traditional insurance agents remain the top information channel, providers should expand their digital marketing efforts and partner with local banking networks to connect with younger, tech-savvy demographics. Finally, promotional campaigns should highlight family financial security and cashless benefits to address the key motivations driving consumer adoption.

VIII. CONCLUSION

This study provides useful insights into the factors governing health insurance awareness and adoption within Tiruchirappalli district, matching broader trends observed across the Indian insurance sector. The analysis shows that while macroeconomic indicators—such as premium volumes crossing Rs 1.2 lakh crore in FY 2024–25—demonstrate positive national growth, local penetration depends heavily on addressing socio-economic factors. The empirical results show that middle-to-high-income urban households have better access to and understanding of insurance options, while low-income groups remain underserved due to high premium barriers and complex policy language. The rejection of the null hypothesis confirms that income levels significantly influence a consumer's insurance literacy. To bridge this gap, insurance providers must move toward consumer-centric operations by simplifying policy terms, offering flexible pricing models, and utilizing multi-channel distribution strategies. Ultimately, improving local awareness regarding claim procedures and pre-existing disease guidelines will build consumer trust, reduce out-of-pocket medical costs, and support sustainable growth in regional insurance coverage.

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