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Research Article

Impact of Artificial Intelligence on Prospective Policy Holders in Selecting Life Insurance Products in Chengalpattu District

V. Devi, Dr. T. Sujatha

Research scholar, Department of Commerce, VISTAS, Pallavaram, Chennai 117 & Assistant professor, Department of Commerce, Prince Shri Balaji Arts and Science College, Ponmar, Chennai -127.

Corresponding Author, Assistant Professor & Research Supervisor, Department of Commerce (Accounts & Finance), VISTAS, Pallavaram, Chennai 117.

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ABSTRACT

The study investigates the growing reliance on artificial intelligence (AI) technologies in personal financial decisions, particularly focusing on how it influences prospective policyholders in selecting life insurance products in Chengalpattu district. This research, involving 173 respondents, combines primary data collected through structured questionnaires with secondary data derived from industry reports, scholarly articles, and market analyses. A significant correlation was identified between gender and the perception of AI in life insurance products, indicating that individuals with a positive perception of AI are more likely to rely on it for decision-making. Descriptive analysis confirmed that AI significantly influences the decision-making process, demonstrating its role in simplifying complex information and improving decision confidence. Findings suggest that AI-driven tools enhance transparency, accuracy, and ease of understanding for policyholders, while also highlighting a gap in personalized advisory services to address specific customer needs. Recommendations include the integration of AI with human advisory support to create a balanced approach, alongside targeted initiatives to increase awareness and build trust in AI capabilities, ensuring broader acceptance and effective utilization among policyholders.

Keywords: Artificial Intelligence, Life Insurance, Decision-Making, Policyholder Perception.

INTRODUCTION

BACKGROUND OF THE STUDY

Artificial intelligence (AI) has emerged as a transformative force in the financial sector, fundamentally reshaping traditional banking, insurance, and investment practices. Its capacity to process large volumes of data with exceptional speed and precision has revolutionized critical aspects such as fraud detection, risk assessment, investment analysis, and customer service (Forbes, 2024; OECD, 2024). In the insurance industry, AI's impact is particularly profound, as it has enabled innovations in underwriting, customer relationship management, and claims processing (FSB, 2024).

AI-powered tools not only optimize operational efficiency but also provide insurers with the ability to deliver highly personalized services tailored to the specific needs of individual clients. These technological advancements have significantly improved customer satisfaction by offering streamlined processes and fostering greater trust between insurers and policyholders. Furthermore, AI's predictive capabilities allow insurers to anticipate risks more effectively, contributing to a more sustainable and customer-centric insurance ecosystem.

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SIGNIFICANCE OF ARTIFICIAL INTELLIGENCE IN LIFE INSURANCE

In the life insurance domain, AI is driving a paradigm shift by redefining how products are conceptualized, marketed, and adopted by prospective policyholders. Advanced machine learning algorithms are now used to enhance underwriting accuracy, enabling insurers to analyze customer data more precisely and offer personalized premium plans based on risk assessments (LifeTime Insurance, 2024; Bigly Sales, 2024). Additionally, AI tools such as recommendation engines provide tailored policy suggestions that align with an individual's financial goals, health conditions, and lifestyle preferences.

This level of personalization not only enhances customer satisfaction but also empowers insurers to meet a diverse array of client needs. The use of AI-driven chatbots and virtual assistants has further simplified customer service processes, enabling seamless communication and immediate resolution of queries. Beyond customer engagement, AI also aids in predicting claim patterns, fraud prevention, and policy renewals, making it an indispensable tool for modern insurers. These technologies are reshaping the life insurance landscape by bridging the gap between insurers and policyholders, ensuring greater convenience and transparency.

PROBLEM STATEMENT

Selecting an appropriate life insurance policy is often a daunting task for prospective policyholders, given the complex nature of insurance terms, intricate application procedures, and limited access to personalized advice (GlobeNewswire, 2024; Morningstar, 2024). Artificial intelligence addresses these challenges by simplifying decision-making through interactive interfaces, real-time policy recommendations, and automated assistance. AI-powered platforms provide users with clear, data-driven insights tailored to their specific needs, significantly reducing the cognitive burden of comparing and selecting policies (Neuroscience News, 2024).

However, despite its potential, several barriers hinder the widespread adoption of AI in the life insurance sector. Key concerns include apprehensions about data privacy, fears of biased decision-making, and limited awareness of AI capabilities among certain demographic groups (World Economic Forum, 2023; IRE Journals, 2024). Addressing these challenges is essential to enhance the effectiveness of AI and ensure its equitable integration into the life insurance process, thus empowering policyholders to make informed decisions.

SCOPE OF THE STUDY

This study centers on Chengalpattu district, aiming to understand the influence of artificial intelligence on prospective policyholders' selection of life insurance products. The scope includes examining variables such as policyholders' perceptions of AI, their comfort levels with AI-driven tools, and the ways AI impacts their decision-making processes. Through a comprehensive analysis of both primary data gathered via structured questionnaires and secondary data from industry reports, the study provides insights into how AI can be effectively utilized to enhance policyholder experiences in this region (LifeTime Insurance, 2024).

The findings aim to offer practical recommendations for includensurers, includeincludeing strategies to address regional preferences and overcome barriers to AI adoption. By tailoring AI tools to local needs and improving awareness, insurers can enhance accessibility, trust, and the overall appeal of life insurance products in Chengalpattu, offering a blueprint for similar regions to adopt AI-driven innovations in the insurance sector.

LITERATURE REVIEW – A DISCUSSION

Artificial intelligence (AI) has emerged as a transformative force in the insurance sector, particularly influencing prospective policyholders in their selection of life insurance products. The

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integration of AI-driven technologies such as chatbots and machine learning has fundamentally altered customer interactions and decision-making processes. Riikkinen et al. (2018) emphasize that insurance chatbots enhance value creation by offering personalized resources, while case examples illustrate their capability to influence customer decision-making dynamics. Similarly, Kaur and Singh (2023) highlight that InsurTech adoption positively impacts customer satisfaction by streamlining services like policy management and online distribution, with predictive relevance observed in enhancing customer experience.

Adeoye (2024) extends this argument, noting that AI-powered personalized insurance products cater to individual needs by leveraging data analytics, fostering engagement through tailored recommendations, proactive risk management, and real-time assistance. Furthermore, Ravi and Vedapradha (2024) identify efficiency and security as critical predictors of service quality in rural populations, showcasing how AI-enabled insurance chatbots improve economic and market performance while addressing rural service gaps.

Anthropomorphism in AI chatbots, as discussed by Patil et al. (2024), also plays a crucial role in shaping customer perceptions, with optimism and innovativeness driving adoption, even as concerns over security remain. This aligns with Kumar et al. (2023), who map AI and machine learning advancements in insurance, revealing significant contributions from developed nations while identifying gaps in adoption in regions like Asia.

Their bibliometric analysis underscores the potential for wider application and research. In Andhra Pradesh, Srinivas and Gandra (2023) reveal a dual landscape of AI adoption, with opportunities like automation counterbalanced by challenges such as financial constraints and technical skill gaps. This highlights the nuanced interplay between AI-driven solutions and sustainable practices within the insurance domain.

RESEARCH GAP

Despite advancements in AI within the insurance sector, there is a lack of understanding regarding its impact on prospective policyholders' decision-making in selecting life insurance products. Existing studies focus on AI's role in customer engagement but overlook its influence on policyholder behavior in product selection. Moreover, while the operational benefits of AI are explored, the effect of AI-driven personalization on trust and long-term relationships remains under-researched. Thus, further investigation is needed into how AI influences decision-making and the role of customer traits in adopting AI-powered insurance services.

OBJECTIVES OF THE STUDY

1. To examine the perception of artificial intelligence among prospective policyholders in selecting life insurance products.
2. To analyze the decision-making process of prospective policyholders influenced by artificial intelligence in choosing life insurance products.

RESEARCH METHODOLOGY

Researcher adopts both primary and secondary data to collect information, A structured questionnaire were distributed to the insurance policy holders through google forms, snowball sampling technique were employed in this study, researcher managed to get 173 fully filled in questionnaire from the respondents, Hence the sample size is 173. Frequency distribution, Correlation and Descriptive analysis were used as statistical tool to analyze the collected data.

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DATA ANALYSIS

Table 1 showing Gender of the Respondents

		Freq	%	Cumm.%
Gender	Male	79	46	46
	Female	94	54	100
	Total	173	100	

Source: Primary Data

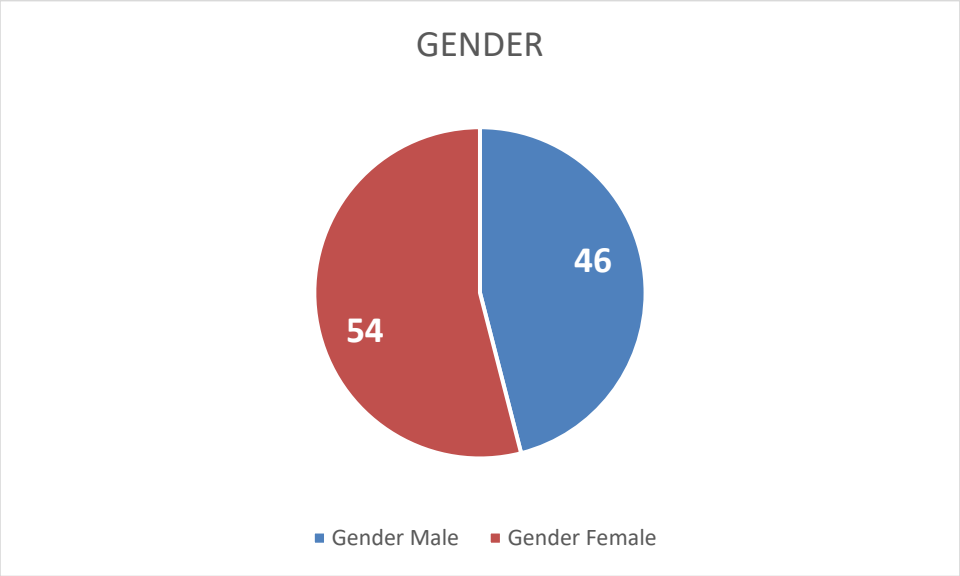

Figure 1 showing Gender of the Respondents

Table 1 shows that out of 173 respondents, 54% are female and 46% are male, indicating a slightly higher female representation in the study.

Table 2 showing Age of the Respondents

Age	Less than 25	35	20	20
	25-34	28	16	36
	35-44	38	22	58
	45-54	37	21	80
	Above 54	35	20	100
	Total	173	100	

Source: Primary Data

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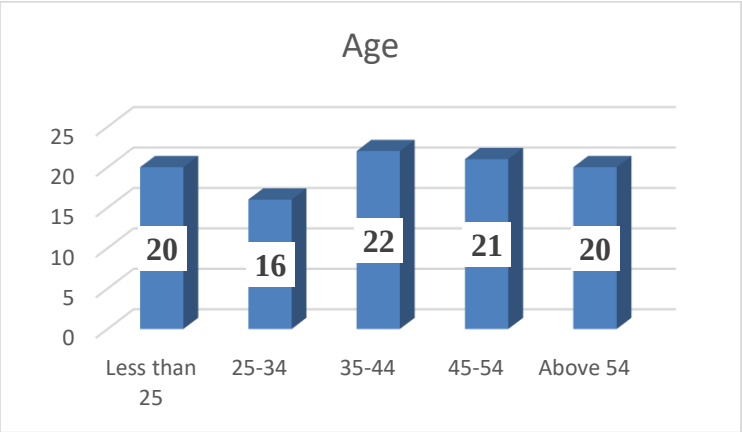

Figure 2 showing Age of the Respondents

Table 2 reveals that the majority of respondents are aged 35 and above, accounting for 63% of the total, with the highest representation from the 35–44 age group at 22%. The youngest group (below 25) and the oldest group (above 54) each contribute 20%, while the 25–34 age group is the smallest at 16%, indicating a respondent base skewed toward middle-aged and older individuals.

Table 3 showing Annual Family Income of the Respondents

Annual Family Income	Less than 3,00,000	32	18	18
	3,00,001 - 6,00,000	34	20	38
	6,00,001 - 9,00,000	35	20	58
	9,00,001 - 12,00,000	44	25	84
	Above 12,00,000	28	16	100
	Total	173	100	

Source: Primary Data

Table 3 shows that the majority of respondents (25%) belong to the annual family income group of ₹9,00,001–₹12,00,000, followed by 20% each in the ₹3,00,001–₹6,00,000 and ₹6,00,001–₹9,00,000 brackets. The lowest representation is from the income group above ₹12,00,000 (16%), while 18% earn less than ₹3,00,000 annually, indicating a moderate-income dominance in the sample.

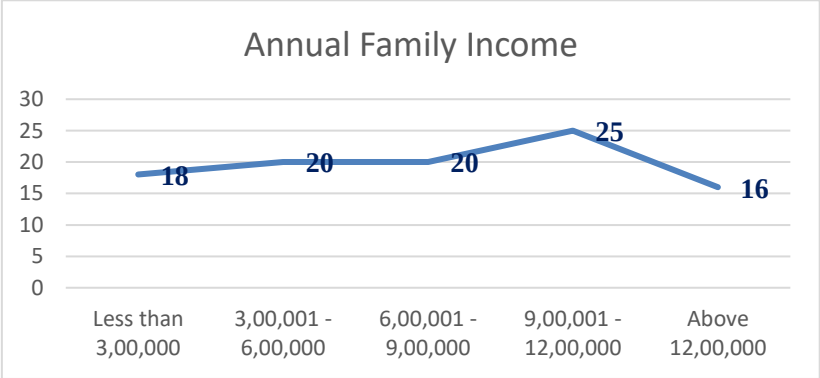

Figure 3 showing Annual Family Income of the respondents

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Table 4 showing Correlation between gender and perception of AI in selecting life insurance policies

		Gender	AI helps me understand policy options better	AI increases my confidence in decisions	AI recommendations match my preferences	AI predicts the best product for me
Gender	Pearson Correlation	1	0.539	0.102	0.113	0.003
	Sig. (2-tailed)		0.009	0.001	0.01	0.03
	N	173	173	173	173	173
AI helps me understand policy options better	Pearson Correlation	0.539	1	0.320	0.367	0.291
	Sig. (2-tailed)	0.009		0.016	0.02	0.036
	N	173	173	173	173	173
AI increases my confidence in decisions	Pearson Correlation	0.102	0.320	1	0.377	0.258
	Sig. (2-tailed)	0.001	0.016		0.031	0.044
	N	173	173	173	173	173
AI recommendations match my preferences	Pearson Correlation	0.113	0.367	0.377	1	0.273
	Sig. (2-tailed)	0.01	0.02	0.031		0.034
	N	173	173	173	173	173
AI predicts the best product for me	Pearson Correlation	0.003	-0.091	0.258	0.273	1
	Sig. (2-tailed)	0.03	0.236	0.044	0.034	
	N	173	173	173	173	173

Source: Computed Data

The correlation analysis reveals that there is a significant positive relationship between gender and the perception of AI in selecting life insurance policies, particularly with regard to how AI helps in understanding policy options better ($r = 0.539$, $p = 0.009$), indicating that gender influences this perception. Additionally, AI's role in boosting confidence and matching preferences shows positive correlations with various variables, with AI helping to understand policy options better ($r = 0.320$, $p = 0.016$) and increasing confidence ($r = 0.367$, $p = 0.02$). The perception of AI's ability to predict the best product also has significant positive correlations with preferences ($r = 0.273$, $p = 0.034$) and confidence ($r = 0.258$, $p = 0.044$).

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H_1 – There is a significant relationship between gender and perception of AI in selecting life insurance policies. - Accepted

H_2 – There is a significant influence of AI in choosing life insurance products

Table 5 showing Descriptive statistics of prospective policyholders influenced by artificial intelligence in choosing life insurance products

	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
I am likely to choose AI recommended products	173	3.121	0.110	1.452
AI helps me evaluate policy benefits	173	3.006	0.105	1.383
I trust AI to guide my selection	173	3.035	0.105	1.376
AI helps me compare policies effectively	173	3.035	0.109	1.430
Valid N (listwise)	173			

Source: Computed Data

The descriptive statistics show that prospective policyholders' perceptions of AI in selecting life insurance products are generally moderate, with the mean scores for all variables ranging from 3.006 to 3.121, indicating a neutral stance towards AI recommendations. The item "I am likely to choose AI recommended products" has the highest mean score of 3.121, suggesting a slightly favorable view of AI's influence on product selection. The standard deviations for all variables range from 1.376 to 1.452, showing moderate variability in responses, indicating that while most respondents have similar views, there is still a spread in opinions regarding the effectiveness and trustworthiness of AI in evaluating and comparing policies.

CONCLUSION

The findings of this study provide valuable insights into the perception of prospective policyholders regarding the influence of artificial intelligence (AI) in selecting life insurance products. The analysis highlights that while AI plays a role in assisting policyholders in evaluating policy benefits and comparing options, the overall impact on their decision-making confidence and trust remains moderate. However, its ability to significantly influence decisions or instill trust is nuanced and varies across individuals. These conclusions underscore the complex relationship between AI and consumer decision-making, suggesting that while AI holds potential, its effectiveness in life insurance product selection is contingent upon the level of trust and understanding by the policyholders.

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