Perceived Demographic Mortality Differentials and Their Impact on Life Insurance Purchase Behavior in Lagos State

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Abstract: This study explores how people's perceptions of age, gender, education, and religious beliefs, referred to as perceived demographic mortality differentials, are associated with their decision to purchase life insurance in Lagos State, Nigeria**.** While financial ability is often seen as the primary factor influencing insurance purchase, this research highlights the significant role of individual beliefs about mortality, shaped by personal and cultural identity. Data were collected from 300 residents across three diverse communities in Lagos State using a structured questionnaire, with responses rated on a Likert scale. Regression analysis showed that all four demographic perceptions were significantly associated with life insurance purchase decisions. Religious beliefs exhibited the strongest explanatory strength ($\beta = 0.618$, $R^2 = 0.382$), closely followed by education ($\beta = 0.614$, $R^2 = 0.376$), while gender ($\beta = 0.557$, $R^2 = 0.310$) and age ($\beta = 0.449$, $R^2 = 0.202$) also played meaningful roles. These findings suggest that people's perceptions influence how they assess risk and make financial decisions, including the decision to purchase life insurance. The study concludes that efforts to boost life insurance participation in Nigeria should go beyond pricing or access and instead focus on culturally relevant messaging, financial education, and trust-building strategies that speak to people's beliefs and lived experiences. These insights are valuable for insurers, policymakers, and development practitioners working to expand financial inclusion in diverse and complex societies.

Keywords: Life insurance; Perceived mortality differentials; Demographic; Religion; Education; Gender; Age; Lagos State

1. Introduction

The intricate relationship between demographic mortality differentials and life assurance policies has long been a subject of critical importance in both public health and actuarial science. This relationship forms the foundation of the life insurance industry, where the ability to accurately predict mortality rates is paramount for risk assessment, policy pricing, and maintaining financial stability. Over the past century, significant improvements in life expectancy driven by advancements in medical science, education, and public health have reshaped global mortality patterns. However, despite these general gains, persistent disparities remain across different demographic groups. These disparities are not merely biological but stem from a complex interplay of social, economic, cultural, and environmental factors (Deaton, 2013; Mirowsky & Ross, 2003). At its core, life assurance operates on the principle of risk pooling. Insurance providers rely heavily on demographic data to estimate life expectancy and predict mortality risk for different population segments (Zietz, 2003). Traditionally, key demographic factors such as age and gender have played a dominant role in determining premium levels and coverage decisions. Older individuals, like men, for instance, are typically charged higher premiums due to their statistically elevated mortality risk. However, the landscape of mortality differentials extends beyond just these two factors. Variables such as education level, religion, geographic location, and socioeconomic status have been increasingly recognized as being linked to mortality outcomes and insurance behavior (Beck & Webb, 2003; Williams & Jackson, 2005).

As actuarial science advances, the insurance industry is increasingly realizing the importance of using more detailed and perception-aware demographic information when assessing risk for different customer groups. The

life assurance industry now finds itself at a critical juncture, balancing the financial imperative for accurate pricing with the ethical need for equitable access. The challenge lies in developing personalized but fair underwriting models that account for demographic realities without reinforcing social inequalities (Outreville, 2011). Moreover, as mortality patterns become increasingly dynamic due to urbanization, technological advancement, and global health shifts, insurers must adapt their models to remain both financially viable and socially responsible (Lin & Grace, 2007). Nowhere is this challenge more evident than in rapidly urbanizing areas in developing countries.

In Nigeria, Lagos stands as the economic powerhouse and Africa's largest megacity, offering a unique and insightful setting to explore how demographic differences in mortality are associated with life insurance decisions. With an estimated population of over 20 million, Lagos serves as a microcosm of Nigeria's diverse demographic landscape including differences in ethnicity, religion, education levels, income brackets, and housing conditions. The state's dual character, consisting of modern financial districts and sprawling informal settlements, results in highly uneven mortality profiles. Public health inequalities, limited access to healthcare in low-income communities, environmental exposures, and lifestyle-related diseases collectively contribute to complex mortality patterns (Baute, 2025).

In this dynamic environment, the life insurance sector must navigate not only the challenges of accurately assessing demographic risk but also the broader issue of low insurance purchase, which is common in many developing markets (Swiss Re Institute, 2019). Residents of economically disadvantaged neighborhoods, for example, may have higher perceived and actual mortality risks, yet often lack access or trust in insurance mechanisms. Conversely, middle-class and affluent populations may be more receptive but base their decisions on entirely different motivations such as legacy planning or investment. Understanding the relationship between perceptions of age, gender roles, educational empowerment, and religious beliefs and insurance-related behavior is therefore essential for improving life insurance participation.

Despite increasing efforts by insurers and regulators to promote life insurance in Nigeria, uptake remains low, particularly among populations who stand to benefit most. Previous studies have largely focused on structural factors such as income, accessibility, or awareness campaigns, but have failed to account for the role of subjective perception, that is, how individuals personally interpret and internalize demographic characteristics in ways that shape their behavior. Demographic mortality differentials such as age, gender, education, and religion are often included as control variables in statistical models, but are rarely explored as perception-based constructs that can be strongly associated with consumer decisions. For example, it is not only the age of the individual that matters, but also how they perceive their stage in life relative to risk and financial responsibility. Similarly, while formal education may correlate with higher insurance uptake, what is more impactful is whether individuals perceive education as empowering them to make sound financial choices. Religious identity may not predict insurance behavior as strongly as the individual's interpretation of what their faith teaches about providence, risk, and money management. These distinctions are crucial in Nigeria, where decisions about financial planning are embedded within complex cultural and spiritual frameworks.

Therefore, this study addresses a critical gap in the literature by examining the relationship between individuals' perceptions of age, gender, educational attainment, and religious beliefs and their attitudes and behaviours toward life insurance purchase. The focus on Lagos State offers a unique opportunity to analyze these dynamics in a highly diverse urban population, thereby contributing empirical insights that can inform policy, product design, and targeted awareness strategies.

Hypotheses of the Study

To test the relationship between demographic mortality differentials and life insurance policy purchase, the following null hypotheses will be evaluated:

H_{01}: Age, gender, educational attainment, religious beliefs, and place of residence collectively do not have a statistically significant association with the purchase of life insurance policies among residents of Lagos State.

H_{02}: Age has no statistically significant relationship with the purchase of life insurance policies among residents of Lagos State.

H_{03}: Gender has no statistically significant relationship with the purchase of life insurance policies among residents of Lagos State.

H_{04}: Educational attainment does not have a statistically significant association with the purchase of life insurance policies among residents of Lagos State.

H_{05}: Religious beliefs and place of residence have no statistically significant relationship with the purchase of life insurance policies among residents of Lagos State.

2. Literature Review

This section reviews research on the demographic mortality gap and its connection to the life insurance industry, synthesizing existing knowledge and identifying research gaps. It explores theoretical frameworks and empirical studies, examining key findings from developed and developing countries before focusing on Nigeria, particularly

Lagos State. The review aims to provide a comprehensive understanding of demographic mortality differentials and their implications for the life insurance sector, offering a foundation for future research in this field.

2.1 Theoretical Framework

The decision to purchase life insurance is often linked to individual perceptions of mortality, which are shaped by demographic characteristics such as age, gender, education, and religion. Two theories that provide a strong conceptual basis for understanding these relationships in the context of life insurance purchases are the Theory of Planned Behavior and the Risk Perception Theory.

The Theory of Planned Behavior, proposed by Ajzen (1991), posits that the intention to perform a specific behavior, such as purchasing life insurance, is determined by three key components: attitudes toward the behavior, subjective norms, and perceived behavioral control. In the context of life insurance purchases, demographic variables are reflected across all three components. For example, individuals with higher levels of education are more likely to have a positive attitude toward insurance products due to increased financial literacy. Religious affiliation may contribute to subjective norms that either encourage or discourage purchasing life insurance, depending on doctrinal views on death and financial planning. Gender and age may also be related to perceived control over financial decisions, especially in contexts where men are traditionally viewed as financial providers or where older individuals perceive greater urgency to secure financial protection for dependents. The theory of Planned Behavior thus explains how demographic attributes relate to individuals' intentions and subsequent decisions regarding life insurance purchases.

The Risk Perception Theory, as articulated by Slovic (1987), provides an additional layer of insight by explaining how individuals assess and respond to mortality risk. The theory holds that risk perception is shaped more by subjective and emotional factors than by objective statistical realities. In the context of life insurance, individuals who perceive themselves as being at greater risk of death due to age, gender, health status, or cultural beliefs may be more motivated to purchase life insurance as a precautionary measure. For instance, older adults may feel more exposed to health risks and thus more inclined to purchase insurance, while religious individuals may either embrace insurance as a moral duty to protect loved ones or avoid it based on beliefs in divine will. Education also plays a role in shaping how individuals interpret and respond to information about mortality and financial risk. Risk Perception Theory is therefore critical to understanding how perceived demographic mortality differentials are related to the actual purchase of life insurance policies, particularly in socioculturally diverse environments like Lagos State. Together, the Theory of Planned Behavior and Risk Perception Theory offer a robust theoretical framework for analyzing how perceived demographic mortality differentials are linked to the purchase, not just the consideration, of life insurance. These perspectives underscore the importance of demographic perceptions and beliefs in shaping financial decisions and highlight the need for targeted policy and marketing strategies that align with the values and experiences of different population segments.

2.2 Conceptual Reviews

The concept of purchasing a life insurance policy has traditionally been explored through economic and financial lenses, emphasizing income level, asset accumulation, and risk preferences. However, emerging research highlights the importance of perceived mortality differentials, which refer to how individuals perceive the likelihood of death based on demographic characteristics such as age, gender, education, and religious beliefs. These perceptions are powerful psychological drivers that directly shape and inform the decision to purchase life insurance, particularly in culturally diverse and economically stratified environments like Lagos State, Nigeria.

Age is closely linked to life insurance purchase through individuals' perception of mortality risk. Younger people often view death as a distant event and are less likely to consider life insurance necessary, leading to delayed purchasing decisions (Beck & Webb, 2003). In contrast, older individuals perceive a higher mortality risk due to declining health and life expectancy, prompting them to prioritize life insurance as a financial safeguard for dependents (Hurwitz & Mitchell, 2025). Additionally, awareness that premiums rise with age can motivate earlier purchases for those who perceive future financial burdens (Lin & Grace, 2007). However, a lack of this awareness can result in postponed decisions and reduced affordability. Therefore, perceived age-related vulnerability to death is closely associated with variations in the timing and likelihood of life insurance policy purchase.

Gender differences also significantly relate to how mortality is perceived and how life insurance is purchased. In many societies, including Nigeria, men are traditionally expected to be financial providers, which increases their likelihood of purchasing life insurance as a form of income replacement (Solomon, 2024). Women, however, are increasingly active in the workforce and financial planning, leading to a gradual shift in insurance purchase patterns. Gender is associated with differences in the rationale and frequency of life insurance policy purchases, based on perceived social and economic roles.

Educational attainment. A higher level of education is generally associated with enhanced financial literacy, increased awareness of risk, and a stronger orientation toward long-term financial planning, all of which contribute

to a higher probability of life insurance purchase. Educated individuals are more likely to understand the benefits of financial planning and risk management, thereby increasing their likelihood of engaging in life insurance ownership (Cole et al., 2013). Education also improves income-generating potential, thereby enhancing an individual's ability to afford life insurance premiums (Uzoagu, 2024). Moreover, education is associated with how individuals assess mortality risk and the need for protection, making it a critical factor in shaping insurance decisions. Abere & Mojekwu (2019) assert that individuals with lower educational attainment tend to experience higher mortality rates and reduced access to insurance. Their study underscores the role of education in enhancing economic welfare by promoting financial literacy, increasing earning capacity, and reducing the likelihood of household poverty. However, they also caution that this relationship is not always linear, particularly in the Nigerian context, where a considerable number of educated individuals remain unemployed. This challenges the traditional assumption that higher education automatically guarantees economic stability and, by extension, the capacity to purchase life insurance.

Religious convictions show a statistically significant association with life insurance purchase decisions by shaping individuals' perceptions of death, risk, and financial planning. In Islamic contexts, life insurance is often discouraged due to concerns over riba (interest), gharar (uncertainty), and its perceived similarity to gambling, which conflicts with Shariah principles (Shalim, 2016; Souiden & Jabeur, 2015). Some religious groups also view insurance as undermining faith in divine protection (Chai & Wu, 2024). Conversely, Christian and secular perspectives often regard life insurance as a moral responsibility and a prudent means of providing for dependents (Hwang & Greenford, 2005). Consequently, religious orientation directly affects the acceptability of life insurance, influencing market penetration, especially in more conservative or faith-centered communities.

2.2.1 Conceptual framework

Figure 1 presents the conceptual framework for this study on perceived demographic mortality differentials and life insurance policy purchases among residents of Lagos State. The arrows indicate the relationship between each demographic factor (age, gender, education, and religious beliefs) and individuals' decisions to purchase life insurance policies.
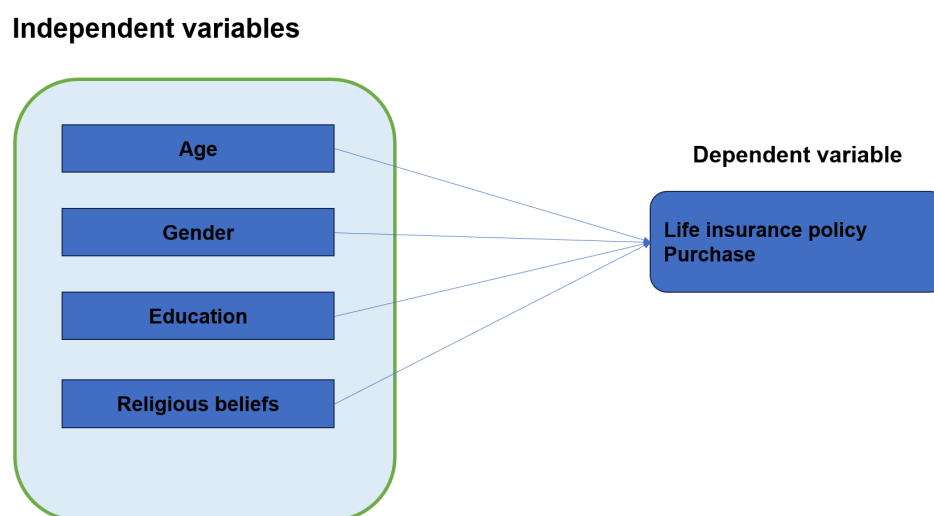

Figure 1. Conceptual framework for the study

2.3 Empirical Review

Existing literature highlights a complex interplay between demographic factors, perceived mortality risk, and the purchase of life insurance. In Nigeria, particularly Lagos State, the life insurance industry faces challenges rooted not only in economic factors but also in public perception and trust. Mojekwu (2002) reported that many Nigerians lack confidence in life insurance companies, leading to increased policy cancellations and unstable market growth.

Studies have consistently shown that socioeconomic status is closely related to mortality rates and life expectancy, which in turn are linked to life insurance decisions. Mackenbach et al. (2008) conducted a comprehensive study across 22 European countries and found that individuals with lower levels of education and

occupational status exhibited significantly higher mortality rates. This underscores the persistent health inequalities tied to social position. Similarly, Chetty et al. (2016) observed significant life expectancy gaps between income groups in the United States, up to 14.6 years for men and 10.1 years for women, highlighting how socioeconomic disparities shape perceptions of vulnerability and insurance needs.

The relationship between economic development and life insurance uptake has also been widely documented. Beck & Webb (2003), in their cross-country analysis of 68 nations, found a positive correlation between national financial development and life insurance penetration. Countries with robust banking systems and low inflation rates experienced greater insurance demand, while inflation discouraged policy uptake. Additionally, lower life expectancy was associated with higher life insurance consumption, reflecting the importance of perceived mortality risk (Browne & Kim, 1993). At the individual level, Mulholland et al. (2016) showed that people with higher subjective life expectancy were less likely to purchase life insurance, supporting the view that perceived demographic mortality differentials relate to purchasing decisions.

According to Yuan & Jiang (2015), educational attainment plays a significant role in shaping insurance demand across China, Taiwan, and Hong Kong. However, national policies like China's one-child law also moderated uptake. Abere & Mojekwu (2019) emphasized that education enhances financial literacy and income-earning capacity, which increases the likelihood of purchasing life insurance. However, they noted that in Nigeria, the high rate of unemployment among educated individuals challenges the assumption that education alone ensures insurance participation. Similarly, they stressed that while education enhances financial literacy and income-earning capacity, the high unemployment rate among educated individuals complicates the expectation that education alone guarantees insurance participation.

Religious beliefs are also significant in shaping insurance decisions through their impact on mortality perception. In Islamic finance, for example, life insurance is often discouraged due to its association with riba (interest), gharar (uncertainty), and gambling-like elements (Hassan & Rashid, 2018). Religious affiliation is strongly linked with attitudes toward life insurance by shaping perceptions of mortality and financial planning. Studies have shown that Muslim adherents and followers of traditional African religions are generally less inclined to engage with conventional insurance products (Donkor et al., 2017; Wilkinson & Pickett, 2009). Some religious groups also oppose insurance products because they believe that they reflect a lack of faith in divine protection (Gill et al., 2018). Conversely, Christian and secular perspectives often support life insurance, framing it as a form of responsible financial planning and risk management (Hwang & Greenford, 2005; Shalim, 2016).

Gender disparities in life insurance uptake also reflect varying mortality perceptions and financial behaviors. For instance, a study in Ghana's Asokore Mampong municipality found that women exhibited higher levels of life insurance participation than men, suggesting greater financial awareness and concern for future risk (Fofie, 2016). However, other studies have shown mixed results, with regional, cultural, and socioeconomic factors mediating the extent of gender differences in insurance decisions (Owusu et al., 2015).

In the African context, regional studies by Laurent & Kivyiro (2015) confirmed that macroeconomic and demographic characteristics, including religion, education, gender, and age, play a significant role in shaping insurance behavior in Nigeria, Kenya, and South Africa. These findings underscore the relevance of demographic mortality differentials in understanding the patterns of life insurance purchase.

Recent studies have increasingly adopted behavioural and perception-oriented approaches to understanding life insurance demand, reflecting a shift away from purely income- or structure-based explanations. Using experimental and survey methods, Cochoy et al. (2023) demonstrated that perceived survival prospects and subjective risk assessments significantly shape individuals' willingness to purchase term life insurance, even in high-income settings. Similarly, research in emerging economies shows that financial literacy, trust in insurance institutions, and individual risk attitudes play a central role in explaining insurance participation beyond traditional demographic indicators (Weedige et al., 2019). Evidence from cross-sectional analyses further suggests that demographic characteristics exert their effects through attitudinal and behavioural channels rather than through objective status alone, with education and belief systems influencing how individuals interpret financial vulnerability and long-term security (Sinha et al., 2021). Studies focusing on informal and urban labour markets also highlight the importance of insurance awareness, confidence, and perceived relevance in shaping purchase intentions, particularly among younger and economically active populations (Adewole et al., 2017). Together, these recent contributions reinforce the relevance of perception-based frameworks for analysing life insurance behaviour in diverse and rapidly changing socioeconomic contexts.

Overall synthesis of empirical evidence, when considered collectively, the empirical studies reviewed reveal important variations in how demographic factors are examined across contexts and research designs. Studies based on cross-national or macroeconomic data, largely conducted in developed economies, tend to emphasize structural determinants such as financial development, institutional capacity, and aggregate demographic profiles, often treating age, education, and gender as fixed explanatory variables. In contrast, survey-based and micro-level studies from developing and emerging economies place greater emphasis on sociocultural conditions, belief systems, and individual interpretations of risk, particularly in relation to religion and educational exposure. Methodologically, much of the existing literature relies on objective demographic indicators or income-based

proxies, with comparatively limited attention given to how individuals subjectively interpret these characteristics in relation to mortality and financial responsibility. The diversity of findings across regions and approaches suggests that demographic factors do not operate in a uniform manner, but are shaped by local social contexts and perception-driven processes. By examining perceived demographic mortality differentials within an urban Nigerian setting, the present study integrates structural and behavioural perspectives and contributes to bridging the gap between macro-level explanations and individual-level insurance decision-making.

3. Research Methodology

A quantitative research design was adopted for this study, as it enabled the systematic collection and analysis of numerical data to evaluate the relationship between demographic mortality differentials such as age, gender, education, religious beliefs and life insurance purchase decisions among residents of Lagos State. The target population comprised individuals who were either current policyholders or potential buyers of life insurance.

The study focuses on perceived demographic mortality differentials in relation to life insurance policy behaviour, assessing how respondents interpret the relevance of demographic characteristics in shaping insurance-related awareness, attitudes, and behavioural intentions. These attitudinal and awareness-oriented measures serve as proxies for underlying mortality perceptions, reflecting how individuals cognitively and socially interpret demographic attributes in relation to perceived risk and financial preparedness. This approach is consistent with perception-based and risk perception research, which emphasises that individuals respond to socially and culturally mediated interpretations of risk rather than explicit probabilistic assessments of mortality.

A convenience sampling technique was used to select a total of 300 participants from three demographically diverse localities: Ajegunle in Ajeromi-Ifelodun Local Government Area, Iyana-Ipaja in Alimosho Local Government Area, and Ikorodu in Ikorodu Local Government Area, with 100 respondents drawn from each. Data were collected using a structured questionnaire aligned with the study objectives. Demographic data were captured alongside perceptions relating to age, gender, education, and religion, all of which were assessed using 5-point Likert-scale items. All variables in the model were measured as composite indices derived from these Likert-scale items. Specifically, perceptions of the selected demographic mortality differentials were measured using multi-item scales, and their mean scores were computed to serve as continuous predictors, while the dependent variable, life insurance policy behaviour was similarly derived. To ensure the instrument's reliability and validity, a pilot study was conducted with 36 individuals, and the resulting Cronbach's alpha coefficient of 0.75 indicated good internal consistency; the result is shown in Table A1 in Appendix. Descriptive statistics, including frequencies and percentages, were used to summarize the demographic characteristics, while inferential statistics, including multiple linear regression and simple linear regression, were employed to test the hypotheses at a 0.05 level of significance. The extent to which respondents agreed or disagreed with the questionnaire items was used to assess the contribution of the independent variables (perceived demographic mortality differentials) to the dependent variable (life insurance policy purchase).

4. Results and Discussion

This session presents the findings of the study on the effects of perceived demographic mortality differentials on life insurance policy purchases among residents of Lagos State, Nigeria. Data were collected from 300 respondents using structured questionnaires and analyzed using descriptive and inferential statistical methods. The analysis explored the association between perceived demographic mortality differentials and life insurance policy purchases, addressing the study's objective and hypotheses. The results are systematically presented in tables and figures, followed by discussions that relate the findings to existing literature and the study's hypotheses.

4.1 Presentation of the Respondent's Socio-Demographic Data

The demographic data for this work, with variables such as age, gender, education, occupation, marital status, household size, and place of residence, along with corresponding response labels, frequencies, and percentages, are represented in Table 1.

Out of the 300 respondents, the age distribution reveals that the majority were young adults, with 53.3% aged between 18 and 25 years and 32.7% between 26 and 35 years, indicating that over 86% of the sample were below age 36. Gender distribution showed a fairly balanced mix, with females slightly outnumbering males (54.3% vs. 45.7%). In terms of education, the sample was highly educated: 54% had tertiary education and 43.3% had postgraduate degrees, while only 2.7% had secondary education. Occupationally, 40.7% were students, followed by 34.7% self-employed and 23.7% employed individuals, with only 1% being retired. A significant proportion (85.3%) were single, while 14.7% were married. Regarding household size, 44.3% lived in homes with 2–4 members, 38% in households with 5 or more, and 17.7% with fewer than two members. The place of residence distribution showed that 37% lived in Ikorodu, 28% in Alimosho, and 25% in Ajeromi. Overall, the demographic

characteristics indicate a predominantly young, educated, and single population, which is reflective of urban Lagos and relevant for understanding how it relates to life insurance policy purchases.

Table 1. Socio-demographic data

Variables	Response Label	Frequency	Percent
Age	18–25	160	53.3
	26–35	98	32.7
	36–45	9	3
	46–55	20	6.7
	56 and above	13	4.3
Gender	Male	137	45.7
	Female	163	54.3
Education	Secondary	8	2.7
	Tertiary	162	54
	Postgraduate	130	43.3
Occupation	Student	122	40.7
	Retired	3	1
	Self-employed	104	34.7
	Employed	71	23.7
Marital status	Single	85.3	85.3
	Married	14.7	14.7
Household size	Less than 2	53	17.7
	2–4	133	44.3
	5 or more	114	38
Place of residence	Ajeromi	105	25
	Alimosho	84	28
	Ikorodu	111	37

4.2 Analysis of the Research Construct

The presentation in Table 2 is the responses on age and gender characteristics. The construct shows that age plays a small but noticeable part in life insurance purchases. Respondents agreed that younger people (under 35) are less likely to purchase life insurance and older people are more likely to buy. There was slight agreement that age affects awareness and understanding of life insurance and providers target older age groups more, but the mean across all age statements was around 3.00, so opinions were divided. For gender, the statement that gender roles influence life insurance buying got the lowest agreement (mean = 2.55), so traditionally, gender roles may not impact buying decisions much. But respondents agreed moderately that women are more likely to buy life insurance for family protection and men see it as an investment tool. The strongest agreement was for the statement that gender equality in marketing increases adoption (mean = 3.23), so inclusive marketing is seen as effective in driving life insurance uptake. Overall, the data shows that while age and gender play a part especially in motivation and marketing impact but their role is nuanced and varies across individuals.

Table 2. Research construct

Age Characteristics	5	4	3	2	1	Total	Mean	SD
Younger individuals (under 35 years) are less likely to purchase life insurance policies.	25 (8.3)	107 (35.7)	67 (22.3)	56 (18.7)	45 (15.0)	300 (100)	3.04	1.217
Life insurance policies are more appealing to older age groups.	52 (17.3)	76 (25.3)	48 (16.0)	79 (26.3)	45 (15.0)	300 (100)	3.04	1.347
Age significantly influences awareness and understanding of life insurance policies.	26 (8.7)	96 (32.0)	83 (27.7)	51 (17.0)	44 (14.6)	300 (100)	3.03	1.195
Life insurance providers target older age groups more actively.	24 (8.0)	102 (34.0)	67 (22.3)	63 (21.0)	44 (14.7)	300 (100)	3.00	1.209
Gender Characteristics	**5**	**4**	**3**	**2**	**1**	**Total**	**Mean**	**SD**
Gender roles influence the likelihood of purchasing life insurance policies.	15 (5.0)	62 (20.7)	62 (20.7)	96 (32.0)	65 (21.7)	300 (100)	2.55	1.153
Women are more likely to purchase life insurance for family protection compared to men.	16 (5.3)	84 (28.0)	82 (27.3)	65 (21.7)	53 (17.7)	300 (100)	2.82	1.178
Men are more inclined to purchase life insurance for investment purposes.	49 (16.3)	101 (33.7)	61 (20.3)	46 (15.3)	43 (14.3)	300 (100)	3.22	1.293
Gender equality in marketing strategies increases life insurance adoption rates.	35 (11.7)	122 (40.7)	62 (20.7)	38 (12.7)	43 (14.3)	300 (100)	3.23	1.236

As shown in Table 3, higher educational attainment and religious endorsements are generally associated with more favorable perceptions toward life insurance uptake. The data on education shows a positive correlation between education and life insurance awareness and take-up. Respondents agreed most strongly with the statement that more education increases awareness of life insurance benefits (mean = 3.33), followed by education campaigns improve life insurance purchases (mean = 3.22). There was moderate agreement that lack of education is a barrier to buying life insurance (mean = 3.18), while educated people are more likely to buy life insurance had a neutral response (mean = 3.03), so there's some variation in opinion. Overall, education seems to play a role in shaping knowledge and behaviour towards life insurance, with standard deviations showing moderate spread. On the other hand, the influence of religion on life insurance purchase decisions seems less clear. Respondents were mildly disagreeing to neutral on the statement that religion influences views on life insurance (mean = 2.67), so religion isn't a major influence for most people. While some agreed that some religious groups see insurance as against their faith (mean = 2.99) and religious teachings on predestination may discourage take-up (mean = 2.95), overall, the responses were mixed. There was also a neutral response to faith-based endorsements improving trust in life insurance (mean = 2.97). So, while religion has some cultural relevance, it's not a major barrier or motivator for life insurance from the respondents' perception.

Table 3. Research construct

Education Influence	5	4	3	2	1	Total	Mean	SD
Higher educational attainment increases awareness of life insurance benefits.	54 (18.0)	110 (36.7)	62 (20.7)	29 (9.7)	45 (15.0)	300 (100)	3.33	1.296
Educated individuals are more likely to purchase life insurance policies.	42 (14.0)	94 (31.3)	54 (18.0)	52 (17.3)	58 (19.3)	300 (100)	3.03	1.351
Lack of education is a major barrier to purchasing life insurance policies.	38 (12.7)	96 (32.0)	82 (27.3)	51 (17.0)	33 (11.0)	300 (100)	3.18	1.186
Educational campaigns significantly improve life insurance uptake.	30 (10.0)	120 (40.0)	76 (25.3)	35 (11.7)	39 (13.0)	300 (100)	3.22	1.180
Religion Influence	**5**	**4**	**3**	**2**	**1**	**Total**	**Mean**	**SD**
Religious beliefs influence perceptions about the need for life insurance.	13 (4.3)	85 (28.3)	57 (19.0)	79 (26.3)	66 (22.0)	300 (100)	2.67	1.222
Some religious groups view life insurance as contradictory to their faith.	30 (10.0)	86 (28.7)	56 (18.7)	107 (35.7)	21 (7.0)	300 (100)	2.99	1.152
Faith-based endorsements of life insurance increase trust and uptake.	14 (4.7)	106 (35.3)	90 (30.0)	36 (12.0)	54 (18.0)	300 (100)	2.97	1.176
Religious teachings on predestination discourage life insurance purchases.	37 (12.3)	65 (21.7)	91 (30.3)	61 (20.3)	46 (15.3)	300 (100)	2.95	1.237

4.3 Analysis of Data

4.3.1 Hypothesis 1

To test the hypothesis that age, gender, educational attainment, and religious beliefs collectively do not have a statistically significant association with the purchase of life insurance policies among residents of Lagos State, a multiple linear regression analysis was conducted, and the results are presented in Table 4.

The model:

$$\text{LIP} = \beta_0 + \beta_1\left(age\right) + \beta_2\left(gender\right) + \beta_3\left(education\right) + \beta_4\left(religion\right) + \varepsilon \qquad (1)$$

where, LIP is life insurance purchase.

Table 4. Model summary for Hypothesis 1

Model Summary[b]										
Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R^2 Change	F Change	df1	df2	Sig. F Change	
1	0.715[a]	0.511	0.505	0.56639	0.511	77.168	4	295	0.000	1.516

Note: a. Predictors: (Constant), Religion, Education, Gender, Age; b. Dependent Variable: life insurance purchase.

According to results from Table 4, there exists a strong multiple correlation coefficient ($R = 0.715$), indicating a substantial linear relationship between the combined predictors (age, gender, education, and religious beliefs) and the dependent variable (life insurance purchase). The coefficient of determination ($R^2 = 0.511$) suggests that approximately 51.1% of the variance in life insurance policy purchase is explained by the combined effects of

perceived age, gender, education, and religious beliefs. After adjusting for the number of predictors, the adjusted $R^2 = 0.505$, confirming the model's predictive strength is consistent. The overall model was statistically significant, $F(4, 295) = 77.168$, $p < 0.001$, indicating that the explanatory variables jointly contribute meaningfully to the explanation of insurance behaviour.

Multicollinearity diagnostics indicate no cause for concern, with tolerance values ranging from 0.503 to 0.566 and Variance Inflation Factor values between 1.767 and 1.987, all within acceptable limits. This suggests that the regression coefficients reported in Table 5 are stable and that each predictor contributes distinct explanatory information.

Table 5. Regression coefficient for Hypothesis 1

			Coefficients[a]				
	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
		B	Std. Error	Beta			
1	(Constant)	0.881	0.127		6.952	0.000	
	Age	-0.080	0.046	-0.100	-1.742	0.083	
	Gender	0.192	0.049	0.219	3.937	0.000	
	Education	0.285	0.042	0.369	6.815	0.000	
	Religion	0.280	0.047	0.337	5.907	0.000	

Note: Tolerance and Variance Inflation Factor statistics indicate no evidence of multicollinearity; a. Dependent Variable: life insurance purchase.

Although age was significant in the simple regression analysis, it was not statistically significant in the multiple regression model ($p = 0.083$). This attenuation reflects the inclusion of education, gender, and religious beliefs, which account for overlapping variation with age when considered jointly. Such patterns are common in multivariate models involving related demographic explanatory variables and do not undermine the robustness of the results.

To assess the relationship between individual demographic mortality differentials and life insurance policy behavior, four separate simple linear regressions were conducted, each corresponding to a specific hypothesis. The results are presented in Table 6.

Table 6. Model summary for Hypotheses 2, 3, 4, and 5

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	Change Statistics					Durbin-Watson	Predictors	Hypothesis
					R^2 Change	F Change	df1	df2	Sig. F Change			
1	0.449[a]	0.202	0.199	0.72032	0.202	75.239	1	298	0.000	1.532	Age	H_{02}
1	0.557[a]	0.310	0.308	0.66952	0.310	134.031	1	298	0.000	1.652	Gender	H_{03}
1	0.614[a]	0.376	0.374	0.63655	0.376	179.940	1	298	0.000	1.225	Education	H_{04}
1	0.618[a]	0.382	0.380	0.63382	0.382	184.064	1	298	0.000	1.715	Religion	H_{05}

Note: Dependent Variable: life insurance purchase. The Durbin–Watson statistic is reported as part of the standard regression output for diagnostic completeness. However, given the cross-sectional nature of the survey data, serial autocorrelation is not expected to be a substantive concern, and the interpretation of the regression results does not rely on this statistic.

Table 7. Regression coefficients for Hypotheses 2, 3, 4, and 5

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Hypothesis
		B	Std. Error	Beta			
1	(Constant)	1.832	0.133		13.806	0.000	H_{02}
	Age	0.361	0.042	0.449	8.674	0.000	
2	(Constant)	1.479	0.131		11.315	0.000	H_{03}
	Gender	0.489	0.042	0.557	11.577	0.000	
3	(Constant)	1.411	0.119		11.891	0.000	H_{04}
	Education	0.474	0.035	0.614	13.414	0.000	
4	(Constant)	1.440	0.115		12.468	0.000	H_{05}
	Religion	0.513	0.038	0.618	13.567	0.000	

4.3.2 Hypothesis 2

The regression model for age was statistically significant, as shown in Table 6, $F(1, 298) = 75.239$, $p < 0.001$, with an R^2 of 0.202, indicating that perceived age-related mortality differentials account for 20.2% of the variance in life insurance policy purchase. The unstandardized coefficient ($B = 0.361$, $p < 0.001$) reported in Table 7, suggests that a one-unit increase in perceived age-related mortality risk is associated with a 0.361-unit increase in

life insurance behaviour. The standardized beta coefficient ($\beta = 0.449$) in Table 7 indicates a moderate positive effect, confirming that age perceptions are a meaningful, though not the strongest, predictor of life insurance purchase decisions.

4.3.3 Hypothesis 3

The model examining the impact of gender explained 31.0% of the variance in the dependent variable ($R^2 = 0.310$) as reported in Table 6, and was statistically significant, $F(1, 298) = 134.031$, $p < 0.001$. The unstandardized coefficient ($B = 0.489$, $p < 0.001$) shown in Table 7, indicates that an increase in perceived gender-related mortality risk corresponds with a 0.489-unit increase in life insurance purchase. The standardized beta coefficient ($\beta = 0.557$) in Table 7, shows a stronger effect than age, suggesting that gender-based perceptions are a more influential factor in shaping insurance decisions.

4.3.4 Hypothesis 4

The regression analysis on education revealed the second-highest explanatory power among the four variables, with $R^2 = 0.376$ and $F(1, 298) = 179.940$, $p < 0.001$, as presented in Table 6, indicating that educational perceptions account for 37.6% of the variation in life insurance policy behavior. The unstandardized coefficient ($B = 0.474$, $p < 0.001$) reported in Table 7, suggests that increased awareness or value placed on education predicts greater participation in insurance. The standardized beta in Table 7 ($\beta = 0.614$) highlights a strong and consistent positive effect of education on insurance behavior.

4.3.5 Hypothesis 5

The analysis of the relationship between religious perceptions and life insurance purchases revealed the strongest statistical association among all variables assessed. The regression model demonstrated the highest explanatory power, with $R^2 = 0.382$, and was statistically significant, $F(1, 298) = 184.064$, $p < 0.001$, as shown in Table 6. The unstandardized coefficient ($B = 0.513$, $p < 0.001$) presented in Table 7 indicates that stronger perceptions of religion-related mortality differentials are associated with a 0.513-unit increase in life insurance behavior. The standardized beta ($\beta = 0.618$) in Table 7 was the highest among all predictors, signifying that religion plays the most influential individual role in shaping life insurance uptake among respondents.

4.4 Discussion of Findings

The hypothesis tests reveal a strong, positive, and statistically significant association between perceived demographic mortality differentials (age, gender, education, and religious beliefs) and life insurance policy behaviour among residents of Lagos State. Regression results indicate that all four variables significantly predict insurance behaviour ($p < 0.001$), thereby supporting the study's central propositions.

Religion emerged as the most significant explanatory variable ($R^2 = 0.382$, $\beta = 0.618$, $p < 0.001$), closely followed by education ($R^2 = 0.376$, $\beta = 0.614$, $p < 0.001$), suggesting that belief systems and educational exposure strongly shape perceptions of mortality, financial preparedness, and insurance participation. These findings are consistent with prior evidence highlighting the role of cultural, religious, and educational factors in insurance decision-making. Gender also exhibited substantial explanatory power ($R^2 = 0.310$, $\beta = 0.557$, $p < 0.001$), reflecting systematic differences in insurance orientation linked to socially defined roles and responsibilities, in line with earlier studies (Solomon, 2024). Although age demonstrated comparatively lower explanatory strength ($R^2 = 0.202$, $\beta = 0.449$, $p < 0.001$), its statistical significance indicates that age-related perceptions of vulnerability remain relevant to insurance behaviour, corroborating findings by Hurwitz & Mitchell (2025).

Notably, these results contrast with studies that identify financial capacity as the primary determinant of life insurance uptake, underscoring the contextual importance of sociocultural norms, institutional trust, and belief systems in the Nigerian setting. From a theoretical perspective, the findings align closely with the Theory of Planned Behavior and Risk Perception Theory. Education and religious beliefs correspond with attitudinal and subjective norm components, gender differences reflect variations in perceived behavioural control, and age- and religion-related effects are consistent with socially mediated interpretations of mortality risk. Collectively, the results demonstrate that life insurance behaviour in Lagos State is shaped by an interaction of attitudes, norms, perceived control, and risk perceptions, thereby reinforcing the applicability of both theoretical frameworks.

5. Conclusion and Recommendation

This study demonstrates that perceived demographic mortality differentials, specifically age, gender, education, and religious beliefs, exhibit statistically significant relationships with life insurance influence on life insurance policy purchase behaviour among residents of Lagos State. The findings highlight the central role of non-financial determinants, with religion and education emerging as particularly strong predictors of insurance uptake. This

underscores the importance of sociocultural perceptions and belief systems in shaping financial decision-making within the Nigerian context.

The results suggest that strategies aimed at improving life insurance penetration in Nigeria should extend beyond income-based interventions to incorporate approaches that address belief structures, awareness gaps, and demographic sensitivities. In particular, insurers and policymakers should recognise the influential role of religious institutions as trusted social actors. Rather than direct promotion, constructive engagement with faith-based organisations, through dialogue, education, and value-consistent messaging can help dispel misconceptions about life insurance, align insurance concepts with prevailing moral and ethical frameworks, and foster informed acceptance within religious communities.

In addition, targeted financial literacy initiatives should be prioritised, especially for younger and less educated populations, to enhance understanding of life insurance as a risk management and long-term financial planning tool. Product design and communication strategies should also be demographically responsive, reflecting variations in age, gender roles, and educational attainment to improve relevance and accessibility.

However, the findings should be interpreted with caution, as the reliance on convenience sampling and online data collection may introduce selection bias and limit generalisability beyond the sampled respondents. Accordingly, the results reflect sample-level associations rather than population-wide causal relationships. Future studies are encouraged to employ probability-based or mixed sampling designs and broader geographic coverage to strengthen external validity and deepen understanding of life insurance behaviour in Nigeria.

Author Contributions

Informed Consent Statement

Data Availability

Acknowledgement

Conflicts of Interest

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Appendix

Table A1. Reliability analysis of measurement constructs (Cronbach's alpha)

Construct	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	No. of Items
Age	0.783	0.785	4
Gender	0.741	0.736	4
Educational attainment	0.878	0.88	4
Religious beliefs	0.856	0.857	4
Life insurance policies purchase	0.813	0.816	8