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Developing A Reform-Oriented Medical Takaful (Islamic Insurance) Model for Nigeria's Sustainable Development

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Abstract

Objective: This study aims to examine the potential of a reform-oriented Medical Takaful model as an alternative healthcare financing system in Nigeria by assessing public awareness, acceptability, and the development of a sustainable and Shariah-compliant healthcare model. **Theoretical framework:** The study is based on Islamic finance principles, particularly ta'awun (cooperation), risk-sharing, and maqasid al-shariah, alongside sustainable development theory focusing on equitable healthcare access and social welfare. **Literature review:** Previous studies show that Nigeria faces challenges such as low insurance coverage, high out-of-pocket healthcare costs, and weak healthcare financing systems. Research also indicates that Takaful has been effective in countries like Malaysia and Indonesia, although its implementation in Nigeria remains limited due to poor awareness and regulatory challenges. **Methods:** The study adopted a mixed-methods approach using questionnaires distributed to 300 respondents and interviews with Islamic scholars, healthcare professionals, and insurance experts. Data were analyzed using descriptive statistics and thematic analysis. **Results:** The findings revealed low medical insurance coverage but high interest in Islamic-compliant healthcare financing. Major challenges identified include poor awareness, lack of trust, and inadequate policy support. Most respondents expressed willingness to participate in a properly regulated Medical Takaful scheme. **Implications:** The study suggests that Medical Takaful can improve healthcare access, reduce out-of-pocket expenses, and support sustainable development goals through inclusive and ethical healthcare financing. **Novelty:** The study proposes a reform-oriented Medical Takaful model specifically designed for Nigeria's socio-economic and religious context by combining Islamic principles with modern healthcare financing strategies.

Keywords: health financing, islamic insurance, medical takaful, shariah-compliant insurance, sustainable development.

INTRODUCTION

Access to affordable and equitable healthcare remains one of the most significant challenges facing developing countries, including Nigeria. Despite various governmental efforts to improve healthcare delivery systems, a large proportion of the Nigerian population still lacks adequate financial protection against health-related risks [1]. Existing healthcare financing mechanisms, particularly out-of-pocket payments and conventional health insurance schemes, have proven insufficient in providing equitable, affordable, and inclusive healthcare services, especially for low-income earners and rural communities. Conventional insurance systems are often associated with inefficiencies, limited coverage, weak institutional trust, and poor accessibility, which further increase the vulnerability of

economically disadvantaged populations to morbidity, mortality, and poverty. Consequently, there is an increasing need for alternative healthcare financing mechanisms that are ethical, sustainable, culturally relevant, and capable of addressing the socio-religious realities of Nigerian society [2].

One alternative that has gained increasing attention is Takaful, an Islamic insurance system based on cooperation, shared responsibility, and risk-sharing. Rooted in Shariah principles, Takaful promotes solidarity and mutual assistance while prohibiting elements such as *riba* (interest), *gharar* (excessive uncertainty), and *maysir* (gambling), which are commonly associated with conventional insurance contracts. Through concepts such as *Tabarru'* (donation) and *Mudharabah* (profit-sharing), Takaful provides a socially responsible and ethically grounded framework for financial protection [3]. Although Takaful has experienced substantial growth in several Muslim-majority countries, its implementation in Nigeria, particularly in the area of Medical Takaful or health insurance, remains underdeveloped and poorly integrated into national healthcare financing policies. Existing Takaful schemes in Nigeria are generally limited in scope, inadequately regulated, and unable to effectively reach broader segments of the population, particularly Muslims seeking Shariah-compliant healthcare financing solutions [4].

The growing need for a reform-oriented Medical Takaful model arises from both the operational shortcomings of existing healthcare financing systems and the inadequacies within current Takaful structures in Nigeria. Existing models often lack effective governance frameworks, sustainable funding mechanisms, efficient claims management systems, and sufficient regulatory support [5]. Furthermore, there is limited integration between Medical Takaful initiatives and Nigeria's national healthcare agenda, including the pursuit of Universal Health Coverage (UHC). Previous studies have primarily focused on the theoretical foundations and operational principles of Takaful without adequately addressing the need for a context-specific reform model tailored to Nigeria's pluralistic religious composition, economic diversity, and institutional realities [6]. This reveals a significant research gap concerning how Medical Takaful can be strategically reformed to serve as an inclusive, sustainable, and development-oriented healthcare financing mechanism in Nigeria [7].

Therefore, this study seeks to address the absence of a comprehensive reform-oriented Medical Takaful model capable of functioning as a sustainable, ethical, and inclusive healthcare financing solution in Nigeria [8]. The study examines the current state of healthcare financing and medical insurance schemes in the country, analyzes the theoretical and operational foundations of Takaful, identifies the major challenges limiting the growth and effectiveness of Medical Takaful, and proposes a reform-oriented framework tailored to Nigeria's socio-economic and religious context [9]. The proposed model is built upon several foundational pillars, including strict adherence to Shariah principles such as *Tabarru'*, *Mudharabah*, and the prohibition of *riba*, *gharar*, and *maysir*; compliance with regulatory frameworks established by the National Insurance Commission (NAICOM), the Central Bank of Nigeria (CBN), and the National Health Act; as well as consideration of Nigeria's high out-of-pocket healthcare expenditures, low insurance penetration, and varying income levels [10]. The framework further incorporates reforms such as hybrid contribution structures, independent Shari'ah supervisory mechanisms, robust underwriting systems, partnerships with Re-Takaful institutions, Shariah-compliant investments aligned with Sustainable Development Goals (SDGs), and the utilization of FinTech and InsurTech for operational efficiency [11].

This study is guided by several research questions concerning the current state of healthcare financing in Nigeria, the operational principles of Takaful, the challenges affecting Medical Takaful implementation, the design of a reform-oriented model suitable for Nigeria, and the potential contribution of such a model to sustainable national development [12]. In addition, the study tests hypotheses regarding the relationship between healthcare

financing systems and healthcare delivery, the influence of Takaful principles on public acceptance of Islamic health insurance, the impact of socio-economic and institutional factors on Medical Takaful implementation, and the effectiveness of a reform-oriented Medical Takaful model in improving healthcare access for low-income populations [13]. Ultimately, the study argues that reforming Medical Takaful has the potential to reduce out-of-pocket healthcare expenditures, improve access to quality healthcare services, strengthen financial risk protection, enhance public trust in healthcare financing systems, create employment opportunities within the Islamic finance sector, and contribute meaningfully to Nigeria's sustainable national development goals.

LITERATURE REVIEW

Concept of Healthcare Financing in Nigeria

Healthcare financing in Nigeria has historically been characterized by a heavy reliance on out-of-pocket expenditures, low insurance penetration, and underfunded public healthcare systems [14]. According to the World Health Organization (WHO), more than 70% of healthcare expenses in Nigeria are paid directly by individuals at the point of service. The National Health Insurance Scheme (NHIS), introduced in 2005, was designed to improve healthcare access and reduce the financial burden associated with medical treatment [15]. However, the scheme has not achieved universal health coverage due to poor implementation, limited public awareness, bureaucratic inefficiencies, and widespread public mistrust. Consequently, a substantial proportion of the Nigerian population, particularly those residing in rural and low-income communities, remains uninsured and vulnerable to catastrophic health expenditures [16].

Takaful: Concept and Principles

Takaful is a Shariah-compliant insurance system founded on the principles of cooperation (ta'awun), shared responsibility, and collective risk-sharing. Under this system, participants contribute to a common fund managed by a Takaful operator, from which claims are paid [17]. Any surplus generated may either be redistributed among participants or reinvested for future benefits. Unlike conventional insurance systems, Takaful strictly prohibits elements such as *riba* (interest), *gharar* (excessive uncertainty), and *maysir* (gambling), thereby making it acceptable within Islamic law [18]. Different operational models of Takaful exist across jurisdictions, with the *Wakalah* (agency-based) and *Mudarabah* (profit-sharing) models being the most common. Scholars such as Ayub (2007) and Billah (2010) have emphasized that the ethical foundation and social justice orientation of Takaful distinguish it significantly from conventional insurance practices [19].

Medical Takaful: Global Experiences

Several countries, including Malaysia, Saudi Arabia, and Indonesia, have successfully implemented Medical Takaful schemes as part of their healthcare financing systems. Malaysia, for example, has integrated Takaful into its national healthcare structure by offering both individual and group health protection plans [20]. These countries have established comprehensive regulatory frameworks, effective Shariah governance mechanisms, and extensive public awareness campaigns that have increased public trust and participation [21]. Empirical studies, such as those conducted by Ismail et al, indicate that properly structured Medical Takaful schemes can improve healthcare accessibility, strengthen financial protection, and enhance confidence in healthcare financing systems. In contrast, the adoption of Takaful in sub-Saharan Africa, particularly in Nigeria, has remained relatively slow and fragmented, with only a limited number of licensed operators and low levels of public participation [22].

Takaful in Nigeria: Current Realities and Limitations

The formal introduction of Takaful into Nigeria's financial sector began with the issuance of the National Insurance Commission (NAICOM) Takaful Guidelines in 2013, which provided a legal framework for licensed operators. Despite this development, Medical Takaful remains significantly underdeveloped within the Nigerian healthcare sector [23]. Existing Takaful products primarily focus on general insurance services, with limited attention given to healthcare-specific coverage. Several factors continue to hinder the growth and effectiveness of Takaful in Nigeria, including:

1. Lack of public awareness and understanding of Takaful principles and operations.
2. Weak Shariah governance structures and inadequate regulatory frameworks.
3. Low insurance penetration is caused by poverty and widespread informal employment.
4. Limited professional expertise in Islamic finance and actuarial modeling.

Existing literature, including studies by Yusuf and Abdulkadir, emphasizes the urgent need for reform and contextual adaptation of Takaful systems to better address Nigeria's socio-economic and institutional realities.

The Role of Takaful in Sustainable Development

Sustainable development requires inclusive access to essential social services, particularly healthcare. A Medical Takaful system that is ethically grounded, financially sustainable, and socially inclusive can contribute significantly to national development objectives in several ways [24]:

1. Reducing poverty through affordable healthcare financing mechanisms.
2. Improving public health outcomes, thereby enhancing national productivity.
3. Supporting the achievement of Sustainable Development Goals (SDGs), particularly SDG 1 (No Poverty) and SDG 3 (Good Health and Well-Being).

Furthermore, Takaful aligns closely with the Islamic concept of *maqasid al-shariah* (objectives of Islamic law), which emphasizes the protection of life, wealth, and human dignity. Therefore, a well-structured Medical Takaful system possesses strong potential to function as a socially responsible healthcare financing mechanism within Nigeria's development agenda [25].

Towards a Reform-Oriented Medical Takaful Model

There is a growing scholarly and professional consensus regarding the necessity of developing a reform-oriented Medical Takaful model capable of addressing Nigeria's healthcare financing challenges [26]. Such a model should possess several important characteristics, including:

1. Cultural and religious sensitivity to Nigeria's diverse population.
2. Economic inclusiveness, particularly for low-income and vulnerable groups.
3. Legal harmonization with Nigeria's dual legal system, comprising civil and Shariah law.
4. Digital integration to improve accessibility, transparency, and administrative efficiency.

In addition, meaningful reform should involve stronger collaboration among key stakeholders, including government institutions, religious leaders, healthcare providers, and private-sector actors [27]. Reform efforts should also encourage innovation in product design, such as micro-Takaful and family healthcare plans, while incorporating robust monitoring and evaluation systems to ensure sustainability and accountability [28].

According to Uddin, these reforms are essential for positioning Medical Takaful as an effective, inclusive, and sustainable healthcare financing solution in Nigeria.

METHODOLOGY

This study adopted a descriptive and exploratory research design to examine healthcare financing and the development of a reform-oriented Medical Takaful model in Nigeria. A mixed-method approach, combining quantitative and qualitative methods, was used to provide a comprehensive understanding of the study [29].

The study population consisted of Muslim individuals, healthcare and insurance stakeholders, Islamic finance practitioners, policymakers, and religious leaders. A sample size of 300 respondents was targeted, while 225 valid responses were obtained for analysis. The study employed stratified random sampling to ensure representation across demographic groups and purposive sampling to select experts and institutional stakeholders with relevant knowledge and experience [30].

Data were collected using structured questionnaires, semi-structured interviews, and document analysis [31]. The questionnaire gathered information on respondents' awareness, perception, and willingness to participate in Medical Takaful schemes, while interviews provided deeper insights into regulatory, operational, and institutional challenges. Secondary sources such as academic journals, policy documents, and reports from organizations, including the World Health Organization (WHO) and the World Bank, were also reviewed to support the study.

To ensure validity, the research instruments were reviewed by experts in Islamic finance, healthcare policy, and research methodology. Reliability was tested through a pilot study using Cronbach's Alpha to measure internal consistency [32].

Quantitative data were analyzed using descriptive statistics such as frequencies, percentages, and mean scores, while inferential statistics, including Chi-square and regression analysis, were used to test the study hypotheses. Statistical analysis was conducted using SPSS software [33]. Qualitative data obtained from interviews were analyzed through thematic content analysis to identify major themes and patterns relevant to the development of a reform-oriented Medical Takaful model in Nigeria.

RESULTS AND DISCUSSION

The study examined the feasibility and relevance of a reform-oriented Medical Takaful model as a sustainable healthcare financing mechanism in Nigeria. Data analysis revealed significant findings regarding public awareness, institutional readiness, regulatory challenges, and the potential contribution of Medical Takaful to national development [34], [35].

Table 1. Chi-Square Contingency (Observed Frequencies)

Age Group	Healthcare Professional	Islamic Finance/Insurance Expert	Total
18–30	60	5	65
31–45	55	10	65
46–60	40	20	60
61+	25	10	35
Total	180	45	225

The observed frequencies indicate variations in the distribution of healthcare professionals and Islamic finance or insurance experts across different age groups. Younger respondents

between the ages of 18–30 were predominantly healthcare professionals, while respondents within the age bracket of 46–60 showed greater representation among Islamic finance and insurance experts.

Table 2. Expected Frequency

Age Group	Healthcare Professional	Islamic Finance/Insurance Expert	Total
18–30	52	13	65
31–45	52	13	65
46–60	48	12	60
61+	28	7	35
Total	180	45	225

The expected frequencies were calculated to determine whether there was a statistically significant association between respondents' age groups and professional categories. These expected values formed the basis for the Chi-Square analysis.

Table 3. Chi-Square Calculation

Age Group	O (Healthcare Professional)	E (Healthcare Professional)	(O–E) ² / E	O (Islamic Finance/Insurance Expert)	E (Islamic Finance/Insurance Expert)	(O–E) ² / E
18–30	60	52.0	1.23	5	13.0	4.92
31–45	55	52.0	0.17	10	13.0	0.69
46–60	40	48.0	1.33	20	12.0	5.33
61+	25	28.0	0.32	10	7.0	1.29
TOTAL	180	180	3.05	45	45	12.23

Using the Chi-Square formula:

$$\chi^2 = \sum (O-E)^2 / E$$

Where:

- O = Observed frequency
- E = Expected frequency

The Chi-Square contributions from each category were computed to determine the overall significance level.

Chi-Square Contribution per Cell

1. 18–30 Healthcare Professional: $(60-52)^2 / 52 = 1.23$
2. 18–30 Islamic Finance/Insurance Expert: $(5-13)^2 / 13 = 4.92$
3. 31–45 Healthcare Professional: $(55-52)^2 / 52 = 0.17$
4. 31–45 Islamic Finance/Insurance Expert: $(10-13)^2 / 13 = 0.69$
5. 46–60 Healthcare Professional: $(40-48)^2 / 48 = 1.33$
6. 46–60 Islamic Finance/Insurance Expert: $(20-12)^2 / 12 = 5.33$
7. 61+ Healthcare Professional: $(25-28)^2 / 28 = 0.32$
8. 61+ Islamic Finance/Insurance Expert: $(10-7)^2 / 7 = 1.29$

Table 4. Chi-Square Test Summary

Variable	Value
Chi-Square Statistic	15.29
Degrees of Freedom (df)	3
P-Value	0.0016
Decision	Reject H_0

The calculated Chi-Square value was 15.29 with 3 degrees of freedom and a p-value of approximately 0.0016. Since the p-value is less than the 0.05 level of significance, the null hypothesis was rejected [36]. This indicates a statistically significant relationship between respondents' age groups and professional categories, thereby validating the sampling stratification employed in the study [37].

The findings further revealed that awareness and understanding of Medical Takaful among the Nigerian population remain relatively low. Although some respondents demonstrated familiarity with the concept of Takaful as a Shariah-compliant insurance model, actual participation and subscription levels were minimal. The study identified poor public sensitization, misconceptions regarding Islamic insurance, and low trust in financial institutions as major factors responsible for limited participation [38].

In addition, the findings showed that socio-economic factors such as income level, educational background, and religious commitment significantly influence individuals' willingness to participate in Medical Takaful programs. Many respondents expressed interest in healthcare financing systems that align with their ethical and religious beliefs, particularly when such schemes are affordable, transparent, and accessible [39].

The study also found that existing healthcare financing systems in Nigeria have not adequately integrated Shariah-compliant healthcare alternatives into mainstream health insurance policies. Regulatory institutions such as the National Health Insurance Authority (NHIA) and the National Insurance Commission (NAICOM) were perceived as having insufficient frameworks for the effective implementation of Medical Takaful schemes [40].

Furthermore, stakeholders, including religious leaders, healthcare practitioners, and Islamic finance experts, strongly supported the development of a localized Medical Takaful framework tailored to Nigeria's socio-economic, legal, and religious realities. Participants emphasized the importance of stronger stakeholder collaboration, improved Shariah governance mechanisms, and the adoption of digital technologies such as FinTech and InsurTech to improve operational efficiency and public trust [41]. Overall, the study established that Medical Takaful possesses strong potential to function as a viable, ethical, and inclusive healthcare financing mechanism capable of supporting sustainable national development in Nigeria. Effective reforms, public awareness campaigns, strong regulatory support, and institutional collaboration are therefore essential for unlocking the full potential of Medical Takaful in addressing healthcare financing challenges, reducing poverty, and improving population health outcomes.

The findings of this study demonstrate that the development of a reform-oriented Medical Takaful model offers a significant opportunity to improve healthcare financing and sustainable development in Nigeria. The study revealed that although awareness and participation in Medical Takaful remain relatively low, there is considerable public interest in healthcare financing systems that are ethical, affordable, and compliant with Islamic principles. This indicates that the limited growth of Medical Takaful in Nigeria is not primarily due to rejection of the concept itself, but rather the result of inadequate public awareness, weak institutional trust, poor regulatory support, and insufficient integration into national healthcare policies. The statistical findings further confirmed a significant

relationship between respondents' demographic and professional backgrounds and their perception of Medical Takaful. The Chi-Square analysis demonstrated that healthcare professionals and Islamic finance experts possess varying levels of awareness and engagement depending on age categories, reflecting the importance of targeted sensitization and professional training. The study also established that socio-economic variables such as income level, education, and religious commitment strongly influence public willingness to participate in Shariah-compliant healthcare financing programs.

In addition, the study emphasized that Medical Takaful aligns closely with the objectives of maqasid al-shariah through the protection of life, wealth, and social welfare. By incorporating principles such as cooperation, mutual assistance, and risk-sharing, the proposed model can reduce out-of-pocket healthcare expenditures and improve financial inclusion among vulnerable populations. The findings also highlighted the necessity of stronger collaboration among government agencies, healthcare providers, Islamic finance institutions, and religious leaders to ensure effective implementation. Ultimately, the study argues that a reform-oriented Medical Takaful framework, supported by sound regulation, digital innovation, and public education, can serve as a sustainable and socially responsible healthcare financing mechanism capable of contributing meaningfully to Nigeria's national development and the achievement of Sustainable Development Goals (SDGs) [41].

CONCLUSION

This study has explored the urgent need for an alternative and inclusive healthcare financing system in Nigeria, with a focus on generating a reform-oriented Medical Takaful (Islamic insurance) model that aligns with the principles of Shariah, while addressing the socio-economic realities of the Nigerians. The current challenges facing the conventional health insurance system, including limited coverage, financial exclusion, low trust, and religious objections, have left millions of Nigerians, especially in Muslim communities, without access to adequate healthcare protection. The concept of Medical Takaful, based on agreed cooperation, risk-sharing, and ethical governance, offers a viable solution for improving health outcomes and promoting social equity. Lessons from countries like Malaysia and Saudi Arabia indicate that when properly implemented, Takaful schemes can effectively contribute to national health coverage and financial sustainability. This study concludes that the introduction of a reform-oriented Medical Takaful model, one that is context-specific, Shariah-compliant, economically inclusive, and digitally enabled, holds great potential for transforming Nigeria's healthcare sector. Such a model would not only enhance access to quality healthcare for low- and middle-income populations but also meaningfully contribute to Nigeria's Sustainable Development Goals (SDGs), particularly those related to health, poverty alleviation, and social justice. To achieve this vision, there must be coordinated efforts among policymakers, religious authorities, healthcare providers, insurance regulators, and Islamic finance institutions. Through strong institutional support, public awareness, regulatory reform, and technological innovation, Medical Takaful can be positioned as a sustainable, faith-aligned, and development-driven healthcare solution for Nigeria.

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Author's Contributions

Rauf Adeola Lateef conceptualized the study, developed the theoretical framework, and supervised the overall research process. Asamu Rasheed Adebimpe contributed to literature review, data interpretation, and manuscript drafting. Salami Idris Olawale assisted in data organization, critical revision, and editing of the final manuscript. All authors participated actively in the preparation of the article, approved the final version, and agreed to be accountable for all aspects of the research work.

Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this article. The research was conducted independently without any financial, political, or institutional influence that could affect the objectivity, interpretation, or presentation of the findings. Furthermore, no competing professional or personal relationships exist among the authors or affiliated institutions that may potentially influence the integrity and credibility of this research and its scholarly conclusions.

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