



Global Scientific and Academic Research Journal of Economics, Business and Management

ISSN: 2583-5645 (Online)

Frequency: Monthly

Published By GSAR Publishers

Journal Homepage Link- <https://gsarpublishers.com/journals-gsarjebm-home/>



Customer Perceived Benefits on the Retention of Child Health Insurance; A Case of Toto Afya Card Scheme Under NHIF in Ilemela District

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Abstract

Purpose of the Study: The study aimed to examine the effect of perceived benefits (services quality, coverage and affordability) on the retention of beneficiaries under the Toto Afya Card scheme in Tanzania. The study also explored qualitative insights from insurance officers and beneficiaries to understand the practical challenges and perceptions surrounding the scheme's benefits and renewal processes.

Design/Methodology: A mixed-methods research design was adopted, combining quantitative and qualitative approaches. Quantitative data were collected through structured questionnaires distributed to beneficiaries of the Toto Afya Card scheme, while qualitative data were gathered through semi-structured interviews with NHIF insurance officers. Statistical techniques, including correlation and regression analyses, were used to test the relationships between perceived benefits (services quality, coverage and affordability) and retention. Thematic analysis was employed to interpret qualitative responses for deeper contextual understanding.

Findings: The findings revealed that perceived affordability is the most influential predictor of beneficiary retention under the Toto Afya Card scheme. While service quality and coverage adequacy also contributed to retention, their effects were comparatively weaker. Qualitative insights indicated that beneficiaries generally view the scheme as affordable for basic services but noted dissatisfaction due to the limited coverage for specialized care and the annual expenditure ceiling.

Originality: This study contributes original empirical evidence on how perceived affordability shapes household decisions to retain child health insurance coverage in Tanzania. By integrating both quantitative and qualitative findings, the study provides a comprehensive understanding of financial perceptions, service adequacy, and user experience under a community-based health insurance model. It extends the application of Expectation Confirmation Theory and SERVQUAL dimensions to the context of child health insurance schemes in low-income settings.

Practical Implications: The results suggest that maintaining affordable premiums, expanding benefit packages, and simplifying digital renewal systems can significantly enhance beneficiary retention. Policymakers and NHIF administrators should consider introducing flexible payment plans, revising coverage limits, and intensifying education on digital self-service platforms to improve ease of renewal and user satisfaction.

Social Implications: Improving affordability and accessibility of the Toto Afya Card will contribute to increased health insurance coverage among children, reducing financial vulnerability and advancing progress toward universal health coverage in Tanzania. Strengthening trust and satisfaction with public health insurance systems can also foster long-term community engagement and equity in healthcare access.

Keywords: Perceived affordability, retention, Toto Afya Card, health insurance, NHIF, Tanzania, universal health coverage, community-based health financing.

Article History

Received: 11/11/2025

Accepted: 20/11/2025

Published: 24/11/2025

Vol -4 Issue -11

PP: -25-32

1.0 INTRODUCTION

Access to affordable healthcare remains a significant challenge worldwide, particularly for vulnerable populations such as children. Health insurance has emerged as a vital

mechanism to reduce financial barriers to accessing healthcare services and is a cornerstone for achieving Universal Health Coverage (UHC), which is a major target under the Sustainable Development Goals (SDGs). Despite the widespread implementation of public and community-based



health insurance programs, global coverage is still inadequate. The World Health Organization reports that more than 60% of the global population lacks sufficient health insurance, with Africa facing particularly low coverage levels. As of 2019, only about 7% of the African population was enrolled in any form of health insurance, far below the African Union's goal to reach at least 50% coverage by 2030. Common factors driving discontinuation of insurance membership include dissatisfaction with healthcare service quality, perceived inadequacy of insurance benefits, and high premiums, as documented in various international studies. These challenges underscore the necessity to explore not only the affordability and accessibility of health insurance but also how end-users perceive its value.

In Tanzania, the government has implemented strategies to expand the reach of health insurance through the National Health Insurance Fund (NHIF), supporting the broader national health financing framework and UHC objectives. A notable intervention aimed at improving healthcare access for children is the Toto Afya Card, launched in 2015. This insurance product offers subsidized, comprehensive healthcare coverage exclusively for children under 18 years, enabling access to outpatient care, inpatient services, diagnostic tests, surgeries, and chronic illness management at NHIF-accredited public and private healthcare facilities. The scheme's primary goal is to reduce out-of-pocket expenses for families and promote timely use of essential health services for children. Despite its broad coverage and strategic importance, the Toto Afya Card scheme has experienced fluctuations in member renewals, with enrollment dropping from over 205,000 children in 2020/21 to approximately 185,000 in 2022/23. This decline raises concerns about the scheme's sustainability and effectiveness, especially as local service delivery contexts and parental experiences may vary considerably across different regions.

This study concentrates on Ilemela District, located in Mwanza Region, which is an urbanizing area characterized by diverse socio-economic conditions and a relatively high demand for health services. Ilemela's concentration of multiple NHIF-accredited healthcare providers makes it an ideal setting to examine the factors influencing household decisions related to renewing or discontinuing child health insurance coverage under the Toto Afya Card. Unlike prior research in Tanzania that has mostly focused on adult or household insurance schemes with emphasis on structural issues such as cost and service availability, this study centers on perception-driven factors specific to child health insurance. International evidence from Ghana, Rwanda, and other countries indicates that perceptions of healthcare quality, clarity and transparency of insurance benefits, and affordability critically influence retention in health insurance schemes. These factors are likely to play an important role in Tanzania as well but have not been adequately explored, particularly in the context of child-focused schemes like Toto Afya Card.

The purpose of this research is to investigate how parents' perceptions of healthcare service quality, the adequacy of

insurance coverage, and affordability influence their decisions to retain the Toto Afya Card for their children. By focusing on these perceived benefits, the study aims to fill a critical knowledge gap and provide actionable insights that can help the NHIF and policymakers design targeted interventions to improve member retention rates. Enhancing retention not only supports the sustainability of the Toto Afya Card scheme but also contributes to better child health outcomes by ensuring continuous access to needed healthcare services. Ultimately, the findings will contribute to the national agenda of achieving UHC and equitable healthcare access for all Tanzanians, with particular focus on the health and wellbeing of children.

2.0 LITERATURE REVIEW

2.1 The Expectation-Confirmation Theory

The Expectation-Confirmation Theory, developed by Richard L. Oliver in 1980, is a widely applied framework for understanding consumer satisfaction and repeat behavior across service contexts, including health insurance (Oliver, 1980). The theory posits that customers form specific expectations before experiencing a service, and satisfaction is determined by comparing these expectations with the actual performance of the service. When the perceived performance meets or exceeds the initial expectations, confirmation occurs, which leads to satisfaction and increases the likelihood of repeated use. Conversely, when performance falls short of expectations, disconfirmation occurs, resulting in dissatisfaction and a reduced intention to continue using the service (Bhattacharjee, 2001; Hsu et al., 2014).

2.1.1 Assumptions of the Theory

ECT assumes that consumers behave rationally, making deliberate comparisons between their pre-service expectations and the actual service experience. It presumes that individuals have clearly defined expectations before using a service and that satisfaction results primarily from cognitive evaluation of these expectations versus outcomes (Oliver, 1980; Kousar et al., 2021). The theory also assumes that consumers are capable of recalling and assessing past service experiences to inform their judgments about future usage.

2.1.2 Strength of the Theory:

One of the main strengths of ECT lies in its ability to link expectation management directly with consumer satisfaction and loyalty. It provides a clear mechanism for understanding how perceived gaps between expected and actual service performance influence retention and repeat usage (Zhou et al., 2022; Yoon & Kim, 2021). In health insurance schemes like Toto Afya, ECT allows policymakers and service providers to identify critical areas where service delivery or cost management must meet beneficiaries' expectations to maintain their continued participation.

2.1.3 Weaknesses of the Theory

Despite its usefulness, ECT has notable limitations. The theory largely focuses on rational, cognitive evaluations, potentially overlooking the emotional, social, and cultural dimensions that influence customer satisfaction and loyalty (Wang & Liao, 2020). For example, in many African

contexts, trust in the healthcare system, peer influence, and community perceptions can play a significant role in retention, which may not be fully captured by a strictly expectation-performance comparison.

2.1.4 Applicability

ECT is particularly relevant for understanding retention in child-focused health insurance schemes like Toto Afya. The theory explains how beneficiaries' perceptions of coverage adequacy and affordability influence their decisions to maintain enrollment. When the insurance package meets or exceeds expectations, positive confirmation fosters satisfaction, trust, and loyalty, encouraging continued participation. On the other hand, perceived gaps in coverage or unexpected costs generate disconfirmation, leading to dissatisfaction and increasing the likelihood of dropout (Zhou et al., 2022; Adjei & Aboagye, 2021).

2.2 SERVQUAL Model

The SERVQUAL Model, developed by Parasuraman, Zeithaml, and Berry in 1988, provides a comprehensive framework for measuring service quality by comparing customers' expectations with their perceptions of actual service delivery (Parasuraman et al., 1988). It identifies five key dimensions: tangibles, reliability, responsiveness, assurance, and empathy that collectively capture the overall quality of service. Tangibles relate to the physical appearance of facilities and equipment, reliability to the consistent and accurate delivery of services, responsiveness to promptness and willingness to assist, assurance to competence and credibility of staff, and empathy to individualized attention and care (Ladhari, 2015; Seth et al., 2020).

2.2.1 Assumptions of the Model:

SERVQUAL assumes that customers are able to accurately articulate both their expectations and perceptions of service quality. It presumes that service quality can be measured across standardized dimensions, allowing for comparison and benchmarking across different service contexts (Parasuraman et al., 1988). The model also assumes that high alignment between expected and perceived service quality leads to customer satisfaction and loyalty. However, in public healthcare settings, systemic constraints such as limited staffing, medicine shortages, or infrastructure deficits can affect service delivery in ways that the model may not fully capture (Asubonteng, McCleary, & Swan, 1996; Alhusban&Alshurideh, 2021).

2.2.2 Strength of the Model

SERVQUAL is widely recognized for its structured approach to assessing service quality and identifying areas for improvement. Its multi-dimensional framework allows managers to pinpoint specific aspects of service—such as responsiveness and reliability—that significantly influence satisfaction and retention (Wainaina & Kihara, 2021; Javed & Ilyas, 2018). The model has been successfully applied in both private and public healthcare contexts across multiple countries, demonstrating its robustness and adaptability.

2.2.3 Weaknesses of the Model

Despite its strengths, SERVQUAL has limitations when applied to public healthcare systems. Originally developed for private and commercial service industries, it may not fully address structural challenges such as resource shortages, bureaucratic inefficiencies, or long waiting times (Alhusban&Alshurideh, 2021; Tavakoli et al., 2022). Cultural and individual differences may also influence how customers perceive and prioritize the five dimensions, affecting the reliability and comparability of results across different populations.

2.2.4 Applicability to the study

In the context of the Toto Afya Card scheme, the SERVQUAL model provides valuable insights into how perceived service quality affects retention. Dimensions such as reliability ensuring consistent access to essential services and medicines and responsiveness prompt assistance and support from healthcare staff are critical drivers of satisfaction (Atinga et al., 2021). When beneficiaries perceive high service quality in these areas, they are more likely to remain enrolled, whereas poor service delivery can undermine trust, reduce satisfaction, and increase dropout rates. SERVQUAL thus offers a practical framework for evaluating and improving service delivery to strengthen customer loyalty in public health insurance programs.

2.3 Empirical Literature Review

2.3.1 Influence of Perceived Service Quality on Customer Retention

Perceived healthcare service quality is a critical determinant of customer retention in health insurance schemes, with reliable, prompt, and empathetic service fostering satisfaction and renewal. While studies such as Maheshwari and Mahapatro (2024) in India, Al-Hussami (2021) in Jordan, and Wambua et al. (2023) in Kenya demonstrate that service quality enhances satisfaction and loyalty, they often rely on generic frameworks like SERVQUAL without fully accounting for public healthcare constraints, systemic barriers, or demographic differences. These studies frequently overlook factors such as staff shortages, drug stock-outs, and rural-urban disparities, limiting their applicability to low-resource settings. This study addresses these gaps by focusing on Tanzania's public health context, applying only the most relevant SERVQUAL dimensions—reliability and responsiveness and incorporating demographic analysis to provide a context-sensitive understanding of how service quality perceptions influence retention under the Toto Afya Card scheme.

2.3.2 Influence of Perceived Adequacy of Coverage on Customer Retention

Customer retention in health insurance schemes is strongly influenced by beneficiaries' perceptions of coverage adequacy, with insufficient or limited coverage often leading to dissatisfaction and higher dropout rates. Studies such as Linje (2017) in Moshi, Tanzania, revealed that lack of essential medicines and restricted access to specialized services reduced retention, though the findings are

geographically limited. Similarly, Waweru et al. (2021) in Nairobi, Kenya, found that clients who perceived benefits as comprehensive were more likely to remain enrolled, highlighting the importance of clear understanding of coverage, though contextual differences limit applicability to Tanzania. Atuoye et al. (2020) in Ghana emphasized that coverage of basic services promotes satisfaction, while absence of specialized care discourages participation, though qualitative methods may limit generalizability. Haile and Ololo (2017) in Ethiopia also confirmed that adequate coverage of drugs, diagnostics, and referrals increases renewal likelihood, yet their study did not focus on child health or specific schemes. The current study addresses these gaps by examining retention under the Toto Afya Card scheme, focusing on child-focused insurance in the Tanzanian context and using structured survey data to generate statistically generalizable insights.

2.3.3 Influence of Perceived Affordability on Customer Retention

Affordability is a key determinant of health insurance retention, particularly among low-income and vulnerable populations, as it encompasses not only the absolute cost of premiums but also the perceived fairness, predictability, and value relative to benefits. Studies such as Mureithi et al. (2015) in South Africa showed that retention is higher when premiums are perceived as fair and proportional to benefits, though findings are context-specific. In Rwanda, Chankova et al. (2008) found that even modest premiums discouraged retention among poor households when not matched by visible service improvements, highlighting the influence of perceived value on renewal decisions. Abihiro and De Allegri (2015) in Malawi emphasized that perceived value, including service quality, fairness, and transparency, strongly affects willingness to pay, though their qualitative approach limits generalizability. Similarly, Ataguba and Goudge (2012) observed in South Africa that affordability challenges disproportionately affect low-income groups and informal sector workers, reducing retention, yet behavioral drivers of perceived value were not examined. This study addresses these gaps by applying the Expectation-Confirmation Theory to evaluate how perceived affordability influences renewal under the child-focused Toto Afya Card scheme in Tanzania.

2.4 Comparison of two theories

The Expectation-Confirmation Theory (ECT) and the SERVQUAL model complement each other in explaining retention and satisfaction in health insurance schemes such as the Toto Afya Card. While ECT focuses on the cognitive evaluation of service by comparing beneficiaries' pre-service expectations with actual performance, highlighting how confirmation or disconfirmation influences satisfaction and continued enrollment, SERVQUAL provides a structured framework to assess specific dimensions of service quality tangibles, reliability, responsiveness, assurance, and empathy that shape those perceptions. Together, the theories link expectation management with measurable service delivery: ECT explains the psychological mechanism behind satisfaction and loyalty, whereas SERVQUAL identifies the

operational areas that affect perceived performance. By integrating both, policymakers and service providers can not only understand how unmet or exceeded expectations impact retention but also pinpoint actionable improvements in service quality that directly influence beneficiaries' satisfaction and likelihood of continued participation.

3.0 RESEARCH METHODOLOGIES

3.1 Research Philosophy

A pragmatic philosophy guided the study, integrating quantitative and qualitative methods. This approach enabled the combination of measurable survey data with contextual insights from interviews, providing a comprehensive understanding of service quality, coverage adequacy, and affordability as they relate to retention (Plano Clark & Creswell, 2015).

3.2 Research Design

A descriptive cross-sectional design was used to systematically collect data at a single point in time. This design allowed the researcher to explore participants' perceptions without manipulating variables, making it time-efficient and suitable for analyzing retention patterns (Creswell & Creswell, 2018; Sedgwick, 2014).

3.3 Research Approach

A mixed-methods approach combined structured surveys and semi-structured interviews. Quantitative surveys assessed patterns and correlations, while qualitative interviews with NHIF staff and healthcare providers provided deeper insights into the motivations, experiences, and challenges behind retention (Creswell & Poth, 2018; Fetters et al., 2013).

3.4 Area of the Study

The study was conducted in Ilemela District, Mwanza Region, selected for its high number of children enrolled in the Toto Afya Card and the availability of both urban and peri-urban populations, enabling diverse perspectives on insurance retention.

3.5 Target Population

The target population included parents or guardians of enrolled children, NHIF staff, and healthcare facility administrators. A total of 340 children were enrolled in 2023, each corresponding to a potential respondent, while staff and administrators provided insights on service delivery and scheme management (NHIF, 2023).

3.6 Sampling Procedures and Sample Size

Simple random sampling was used for survey respondents, ensuring each family had an equal chance of selection. Purposive sampling selected key NHIF staff and facility administrators. Using Krejcie and Morgan's (1970) table, a sample of 181 respondents was deemed sufficient for statistical reliability and representativeness.

3.7 Research Instruments

Data were collected using structured questionnaires for parents/guardians and semi-structured interviews for NHIF staff and facility administrators. Questionnaires focused on service quality, coverage, affordability, and willingness to

renew, while interviews explored implementation challenges and beneficiaries' experiences (Creswell & Creswell, 2018; Museum et al., 2022).

3.8 Data Collection Procedures

Questionnaires were distributed both manually and online with trained enumerators, while interviews followed a structured checklist aligned with study objectives.

3.9 Data Analysis Techniques

Quantitative data were analyzed using SPSS version 26, employing descriptive statistics (frequencies, means, percentages), correlation, and multiple regression analysis to determine predictors of patient revisit. Qualitative data underwent thematic analysis to identify recurring patterns, motivations, and challenges influencing retention.

4.0 FINDINGS

4.1 Regression analysis Results

Model		Unstandardized Coefficients		Standardized Coefficient	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.304	.203		1.497	0.037
	COVER	.331	.082	.304	4.028	0.000
	AFFORD	.325	.053	.415	6.096	0.000
	QUAL	.214	.070	.200	3.057	0.003

a. Dependent Variable: RETEN

$$\text{Revisit} = 0.304 + 0.331(\text{Cover}) + 0.321(\text{Afford}) + 0.214(\text{Qual}) \dots \dots \text{Equation 1}$$

Perceived affordability has the strongest effect on retention ($B = .325$, $\beta = .415$, $t = 6.096$, $p < .000$). This indicates that a one-unit increase in perceived affordability is associated with a .325 increase in retention, holding other variables constant.

Coverage adequacy also significantly predicts retention ($B = .331$, $\beta = .304$, $t = 4.028$, $p < .000$). this shows that for every unit increase in coverage adequacy will result into increase of 0.331 units in patient revisit. This suggests that parents who perceive the Toto Afya Card as sufficient in meeting their child's medical needs are more likely to renew.

Perceived service quality has a positive and significant impact ($B = .214$, $\beta = .200$, $t = 3.057$, $p = .003$). this imply that for every unit increase in perceived quality, will result into 0.214 unit increase in patient revisit. While its influence is comparatively smaller than affordability and coverage, it still meaningfully contributes to retention.

4.2 Discussion of findings

4.2.1 Effect of Perceived Healthcare Service Quality on Retention

The quantitative findings of the study reveal that perceived healthcare service quality has a significant positive effect on

the retention of child health insurance under the Toto Afya Card scheme. Respondents agreed that health facilities provide timely care ($M = 3.89$, $SD = .538$), treat patients respectfully ($M = 3.71$, $SD = .610$), and offer services comparable to out-of-pocket payments ($M = 3.57$, $SD = .557$). Correlation analysis showed a strong positive relationship between perceived service quality and retention ($r = .656$, $p < .01$), while regression results confirmed a statistically significant effect ($B = .214$, $p = .003$). These findings suggest that higher perceptions of service quality significantly increase the likelihood of card renewal. The results align with the SERVQUAL framework (Parasuraman et al., 1988) and Expectation-Confirmation Theory (Oliver, 1980), emphasizing that reliability, responsiveness, and empathy in healthcare delivery foster satisfaction and loyalty. However, moderate mean scores indicate the need for further improvements, especially in ensuring consistency and parity with out-of-pocket services across facilities.

The qualitative findings reinforce the quantitative results, showing that beneficiaries' and officers' perspectives converge on the importance of service quality in retention. Health and insurance officers noted that although services are intended to be equal for all patients regardless of payment method, some beneficiaries experience challenges particularly delays and disturbances in district-level hospitals which discourage renewal. Several officers acknowledged that negative experiences, such as long waiting times and poor responsiveness, lead families to switch packages or move to other insurance providers. Conversely, families who receive timely, respectful, and equitable care are more likely to renew their Toto Afya Cards. The officers also emphasized that the scheme's objective is to ensure that all children access healthcare with minimal financial burden, consistent with Universal Health Coverage (WHO, 2010). Overall, the qualitative evidence complements the quantitative data, confirming that perceived service quality, alongside affordability and coverage adequacy, plays a crucial role in sustaining membership in the Toto Afya Card scheme.

4.2.2 Effect of Perceived Adequacy of Coverage on Retention

The quantitative findings indicate that perceived adequacy of coverage has a strong and statistically significant effect on the retention of beneficiaries under the Toto Afya Card scheme. Respondents generally agreed that the scheme sufficiently meets their children's medical needs ($M = 3.64$, $SD = .533$), minimizes out-of-pocket expenses ($M = 3.78$, $SD = .573$), and fulfills their expected benefits ($M = 3.58$, $SD = .601$). Correlation analysis revealed a strong positive relationship between coverage adequacy and retention ($r = .739$, $p < .01$), while regression analysis confirmed a significant predictive effect ($B = .331$, $\beta = .304$, $p < .001$). These results suggest that when beneficiaries perceive the scope of coverage to be comprehensive and consistent with their expectations, they are more likely to renew their membership. The findings align with the Expectation-Confirmation Theory (Bhattacharjee, 2001) and the SERVQUAL framework (Parasuraman et al., 1988), which emphasize that confirmation of expectations and

reliability in service delivery enhance satisfaction and loyalty. However, the relatively lower mean score for trust in future coverage ($M = 3.54$, $SD = .756$) indicates that some households remain uncertain about long-term adequacy, suggesting the need for clearer communication and transparency regarding benefit limits and service coverage.

The qualitative findings support the quantitative results by revealing that while the Toto Afya Card adequately covers primary healthcare services, it has notable limitations in specialized and advanced treatments. Insurance and medical officers acknowledged that the scheme does not cover high-cost procedures such as X-rays, CT scans, and heart-related treatments, leading some beneficiaries to incur out-of-pocket costs or seek alternative insurance providers. Officers further reported that these coverage gaps influence renewal decisions, with some families opting to downgrade, switch, or discontinue the scheme altogether. These insights echo findings by Kapologwe et al. (2017) in Tanzania and Kimani et al. (2016) in Kenya, which similarly identified limited benefit packages as a major cause of non-renewal. Overall, the qualitative evidence underscores that perceived adequacy of coverage directly shapes trust, satisfaction, and retention. Addressing these gaps by expanding coverage to include essential specialized services and improving communication on benefit entitlements would enhance perceived value, reinforce confidence, and strengthen retention among Toto Afya Card beneficiaries.

4.2.3 Effect of Perceived Affordability on Retention

The quantitative findings of the study reveal that perceived affordability is the most influential factor affecting retention under the Toto Afya Card scheme. Respondents moderately agreed that the scheme is affordable ($M = 3.46$, $SD = .665$), reasonably priced relative to benefits ($M = 3.61$, $SD = .748$), and manageable within household budgets ($M = 3.33$, $SD = .909$). Correlation analysis showed the strongest positive relationship between affordability and retention ($r = .751$, $p < .01$), while regression results confirmed affordability as a significant predictor ($B = .325$, $\beta = .415$, $p < .001$). These findings suggest that even when service quality and coverage adequacy are satisfactory, affordability remains the dominant determinant of renewal. This aligns with economic and behavioral theories, including Expectation-Confirmation Theory (Oliver, 1980), which posits that satisfaction and continued usage depend on whether the perceived benefits justify the costs. The findings also support SERVQUAL's tangibles dimension, reflecting financial accessibility as a key part of the overall service experience. Prior studies in Tanzania, Ghana, and Kenya (Macha et al., 2012; Kusi et al., 2015; Kimani et al., 2016) similarly emphasize that the affordability of premiums strongly influences households' willingness to renew insurance schemes. Therefore, maintaining reasonably priced packages and introducing flexible payment options could enhance satisfaction and retention.

The qualitative findings reinforce the quantitative results by showing that affordability is closely tied to both cost and the

scope of coverage. Insurance officers explained that although the Toto Afya Card is generally considered economical, it does not extend to specialized or high-cost medical services, limiting its perceived value. While officers noted that affordability itself has not been a major cause of non-renewal, they acknowledged that expanding benefits to cover advanced care could further improve retention. Moreover, interviews revealed ongoing efforts by the NHIF to enhance accessibility and convenience through online self-service renewal platforms. However, digital literacy challenges among beneficiaries hinder full utilization of these services. Officers reported that "there is less understanding among Toto Afya Card members on using the digital platform to renew their cards," highlighting the need for user education and awareness campaigns. Another concern raised by patients was the annual payment limit of TZS 2.5 million, which some families find restrictive, especially when frequent or specialized care is needed. This coverage ceiling may diminish perceptions of affordability and adequacy. Overall, the qualitative insights confirm that affordability when combined with accessible services, digital literacy support, and flexible coverage plays a central role in influencing renewal decisions and sustaining participation in the Toto Afya Card scheme.

5.1 Conclusion

This study concludes that perceived healthcare service quality, adequacy of coverage, and affordability collectively influence the retention of beneficiaries under the Toto Afya Card scheme, with affordability emerging as the most dominant factor shaping renewal decisions. The findings demonstrate that beneficiaries' continued participation in the scheme depends largely on their perception of how accessible, reliable, and financially manageable the program is. When parents and guardians believe that health facilities deliver timely, respectful, and reliable care, and that the Toto Afya Card sufficiently meets their children's medical needs while remaining affordable, they are more likely to renew their membership. Although service quality and coverage adequacy are significant in shaping satisfaction, the ultimate decision to continue enrollment is determined by whether the insurance cost aligns with household income levels and whether the benefits received justify the expense. This observation underscores the critical role of affordability in promoting sustained participation in child health insurance programs, especially within low- and middle-income settings where competing financial priorities influence household decisions.

Qualitative findings further reinforced the statistical evidence by revealing that, while the Toto Afya Card scheme performs well in providing primary healthcare services, there are notable challenges that may hinder beneficiary retention. Participants highlighted that the scheme does not fully cover specialized or advanced medical services such as diagnostic tests and major treatments, which sometimes forces families to pay out-of-pocket or seek alternative insurance options. These gaps in coverage influence perceptions of adequacy and long-term value, potentially discouraging renewal. Furthermore, while the introduction of online self-service

platforms for card renewal represents a positive innovation aimed at improving convenience and efficiency, many beneficiaries lack adequate digital literacy to use these systems effectively, leading to frustration and underutilization. Additionally, the annual expenditure ceiling imposed on healthcare benefits creates a perception of financial limitation, particularly among families whose children require frequent or costly treatments.

5.2 Recommendations for Improving the Toto Afya Card Scheme

To enhance the effectiveness and sustainability of the Toto Afya Card, several recommendations are proposed for key stakeholders. For the Ministry of Health, introducing flexible payment options such as instalment plans or mobile money contributions can reduce financial burdens on households and improve retention rates. Additionally, conducting regular assessments of service quality, affordability, and coverage adequacy will help identify gaps and support evidence-based improvements. For hospitals and healthcare facilities, emphasis should be placed on providing timely, respectful, and consistent care that meets patient expectations, aligning with SERVQUAL principles. Ensuring the availability of essential drugs, diagnostics, and treatments under the scheme is critical to maintaining coverage adequacy. Facilities should also educate parents and guardians about scheme benefits and encourage active service use, while implementing patient satisfaction surveys to continuously identify service gaps and enhance care quality. For insurance companies, carefully calibrated premium adjustments can expand coverage to include currently excluded diagnostics, reducing out-of-pocket expenses and improving the perceived value of the card. Enhancing service quality is also recommended to encourage renewal and sustained participation in the program. Collectively, these measures aim to improve accessibility, trust, and satisfaction among beneficiaries, thereby supporting higher enrolment and retention rates.

5.3 Areas for Further Study

An area for further research could be to examine the impact of extended and specialised healthcare coverage on the retention and satisfaction of child health insurance beneficiaries under the Toto Afya Card scheme. While the current study highlights the importance of service quality, coverage adequacy, and affordability, gaps remain regarding how the inclusion of advanced diagnostics, specialised treatments, and comprehensive care packages might influence families' renewal decisions and perceptions of value. Investigating this area could provide insights into the cost-benefit implications of expanding coverage, inform premium-setting strategies, and guide policy decisions aimed at enhancing both the accessibility and sustainability of the scheme.

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