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ASSESSMENT OF THE DIFFERENTIAL HEALTHCARE COSTS BETWEEN INSURED AND NON-INSURED PATIENTS ATTENDING THE GENERAL OUT PATIENT CLINIC, BARAU DIKKO TEACHING HOSPITAL, KADUNA

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ABSTRACT

This study assesses the differential healthcare costs between insured and non-insured patients attending the general Out Patient Clinic, Barau Dikko Teaching Hospital, Kaduna. The study used survey method, descriptive and inferential statistics to analyze the data. The results showed that among those enrolled in health insurance program, 23.1% are covered by the National Health Insurance Scheme (NHIS). In comparison, 50.3% are enrolled in the Kaduna State Contributory Health Management Authority (KADCHMA). The non-enrolled constitute 26.6% and non-enrolled under Private Health Insurance or any Community-Based insurance scheme. This indicates a higher prevalence of KADCHMA coverage. Furthermore, when assuming equal variances, the t-test indicates a significant difference in healthcare spending between the two groups, with a t-statistic of -5.476 and a p-value of 0.000. The findings suggest that individuals enrolled in a health insurance program tend to spend significantly less on healthcare services per month than those not enrolled. This difference is statistically significant, indicating that health insurance coverage is associated with reduced healthcare spending among the surveyed individuals in the general our patient clinic of Barau Dikko Teaching Hospital. The study recommends among others that Collaboration among healthcare stakeholders, including government agencies, healthcare providers, insurance companies, and community organizations, is crucial for successfully implementing healthcare access and affordability strategies. By working together, these stakeholders can leverage their resources and expertise to address the healthcare system's complex challenges and ensure better health outcomes for all individuals.

Keyword: Assessment, Differential, Healthcare, Costs, Insured, Non-Insured

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INTRODUCTION

The National Health Insurance Scheme (NHIS), introduced in Nigeria in 1999, represents a crucial step towards addressing the limitations of the prevailing out-of-pocket payment system (Federal Ministry of Health, 2012). In 2022, NHIS became National Heath Insurance Authority. The NHIS was designed to expand access to healthcare services and alleviate the financial barriers that hinder individuals from seeking necessary medical care (Onwujekwe, Uzochukwu and Obikeze, 2011). The primary objective of the NHIS is to provide financial risk protection to Nigerians by pooling resources through a prepayment mechanism for healthcare services (Akinyemi, Owopetu, and Agbejule, 2021). This system is anticipated to enhance access to healthcare and minimize the financial hardships that hinder individuals from accessing medical services. However, the NHIS has encountered a range of challenges that impact its ability to achieve universal coverage and ensure equitable access to healthcare (Abah, 2022).

The healthcare landscape in many developing nations, including Nigeria, is characterized by significant disparities in healthcare access, utilization, and financial burden among different segments of the population. In this context, health insurance has emerged as a potential solution to address these disparities by providing a mechanism for financial protection and improved access to healthcare services. Despite the potential benefits of health insurance, there remains a dearth of comprehensive studies that rigorously examine the impact of health insurance coverage on healthcare utilization and the associated healthcare costs, particularly in the context of specific healthcare institutions.

While the potential advantages of health insurance in alleviating healthcare cost burdens are recognized, there is a dearth of empirical research that specifically focuses on the Nigerian healthcare context (Aregbeshola and Khan, 2018). Most studies conducted in this realm have been broad in scope and lack a localized perspective (Fadare, Adeoti, Aina, Solomon and Ijalana, 2015). As a result, there exists a gap in understanding the intricate relationship between health insurance, healthcare costs, and patient experiences within the Nigerian healthcare system. Consequently, there is a pressing need to investigate the comparative dynamics of insured and non-insured patients attending Barau Dikko Teaching Hospital, Kaduna, to comprehensively understand the implications of health insurance and healthcare costs on healthcare utilization and financial burden.

LITERATURE REVIEW

CONCEPTUAL ISSUES

Health Insurance

In examining the concept of health insurance, various authors have provided insightful reviews that illuminate its purpose, structure, types, benefits, and associated challenges within the context of healthcare and social welfare. This review aims to synthesize and reflect upon the perspectives of these authors, offering a

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nuanced understanding of health insurance and its implications.

Authors such as Rosenstock (1966) emphasize the core purpose of health insurance, highlighting its role in mitigating the financial risks linked to healthcare expenses. Through risk pooling and collective financial contributions, health insurance provides individuals and families with a safety net against unforeseen medical costs. This perspective resonates with the idea that healthcare expenses can exert significant financial strain, potentially leading to impoverishment or limited access to medical services. The rationale of health insurance rests on the principle of equitable resource sharing to ensure that all individuals have access to essential healthcare services.

The conceptualization of health insurance's structure and mechanism finds resonance in the works of various scholars. Ajzen's Theory of Planned Behavior (1985) offers insights into the operational dynamics of health insurance, emphasizing the role of individual attitudes, subjective norms, and perceived behavioral control (Ajzen, 1985). This theoretical lens provides a framework to understand the mechanisms through which individuals engage with health insurance options. By paying regular premiums, policyholders collectively pool resources to manage and distribute the financial risks associated with healthcare needs.

In terms of classification of health insurance, the classification has been categorized into private and public, and has been explored by scholars such as Adler and Newman (2002), and Shi and Singh (2015). Private health insurance, offered by private companies, caters to diverse coverage needs and preferences. This resonates with the idea that private plans often offer more comprehensive coverage, tailored to individual requirements. On the other hand, public health insurance programs, as advocated by Marmot et al. (2008), are driven by government entities to ensure accessible healthcare for all, irrespective of socioeconomic status5. This classification underscores the dualistic nature of health insurance, catering to individual choice and broader societal goals.

When considering the benefits of health insurance, Fishbein and Ajzen (2010), reported that health insurance had a multifaceted benefit that extend beyond financial protection. The concept of "access to care," as highlighted in their study aligns with the notion that health insurance facilitates timely medical attention and early intervention. This perspective resonates with the idea that preventive services covered by health insurance plans contribute to improved overall well-being and disease prevention.

In expanding the significance of health insurance, as understood through the lens of Marmot et al. (2008), they underscore the important of health insurance in addressing health disparities. This perspective resonates with the notion that health insurance can serve as a tool for achieving equitable access to medical services and mitigating socioeconomic inequalities. However, challenges posed by rising healthcare costs, policy complexities, and disparities in coverage, as acknowledged by Shi and Singh (2015) and Adler and Newman

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(2002), highlight the intricate landscape that health insurance operates within.

In Nigeria and in Kaduna state specifically, the conceptualization of health insurance takes on a distinctive dimension when applied to Nigeria's National Health Insurance Scheme (NHIS) and the Kaduna State Contributory Health Management Authority (KADCHMA). These entities exemplify crucial endeavors aimed at providing accessible and affordable healthcare services to Nigerians and residents of Kaduna State, respectively. An exploration of NHIS and KADCHMA through the prism of health insurance illuminates their underlying purpose, structural frameworks, benefits, challenges, and implications within the intricate Nigerian context.

NHIS and KADCHMA share a central purpose – addressing the prevalent hurdles in accessing quality healthcare services in Nigeria. These institutions are predicated on the acknowledgment of the financial impediments that hinder many individuals from seeking timely medical care. The rationale of NHIS and KADCHMA is deeply rooted in their commitment to furnishing financial security, augmenting healthcare utilization, and mitigating health-related disparities (NHIS, and KADCHMA, 2021; Musa and Musa, 2018). By facilitating health insurance coverage, these entities seek to empower individuals with the means to access medical services devoid of the specter of exorbitant expenditures.

HEALTH CARE INSURANCE SERVICES IN KADUNA STATE

National Health Insurance Scheme (NHIS) and the Kaduna State Contributory Health Management Authority (KADCHMA)

Functioning as a governmental agency, NHIS orchestrates health insurance coverage for the Nigerian populace. Employing a contributory model, NHIS entails individuals and employers paying premiums to secure access to a spectrum of medical services (NHIS, n.d.). KADCHMA, with a focus on Kaduna State, adopts a similar contributory health insurance paradigm (Akinyemi, Adebowale, Bamgboye and Ayeni, 2017). These structural constructs resonate with the fundamental principle of risk pooling and resource aggregation, where individual contributions coalesce to forge a collective fund that underpins the provisioning of healthcare services as needed.

The benefits stemming from NHIS and KADCHMA outstrip mere financial security. They encompass enriched healthcare access, heightened healthcare utilization, and a reduction in out of-pocket expenditures (NHIS, n.d.; KADCHMA, 2018). These programs hold the potential to alleviate the burden on public healthcare institutions and contribute to a more equitable allocation of medical resources1. Furthermore, through the provision of preventive and indispensable medical services, NHIS and KADCHMA contribute to ameliorated health outcomes and curbed disease prevalence (Akinyemi, Owopetu and Agbejule, 2021; KADCHMA, 2018).

Yet, the operationalization of NHIS and KADCHMA does not unfold devoid of challenges. Issues such as low awareness, insufficient funding, administrative

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complexities, and disparate healthcare facility distribution present formidable barriers to their efficacy (Alawode, Adewole, 2021; Akinyemi, Owopetu and Agbejule, 2021). Moreover, the conundrum of equity in coverage looms large – guaranteeing that vulnerable and marginalized segments of society derive equitable benefits from these programs is a multifaceted endeavor (Chukwudozie, 2015). Notwithstanding these challenges proffer prospects for refinement and optimization of the health insurance systems across Nigeria.

The ramifications of NHIS and KADCHMA resonate profoundly, aligning closely with the aspirations of attaining universal health coverage (UHC) and curtailing health inequalities1. The implementation of health insurance frameworks at the national and state echelons attests to Nigeria's commitment to redress healthcare disparities and ameliorate the health and well-being of its citizenry2. These initiatives also dovetail with the broader global agenda of ensuring that healthcare services are accessible and economically viable for all.

In summary, health insurance finds tangible embodiment in the NHIS and KADCHMA initiatives in Kaduna State. These entities epitomize the principles of risk pooling, financial security, and equitable healthcare access. Despite grappling with challenges, they harbor the latent potential to revolutionize healthcare delivery in Nigeria by dismantling financial barriers, augmenting healthcare utilization, and fostering improved health outcomes. NHIS and KADCHMA underscore the intricate interplay of policy, financial dynamics, and healthcare provision as they endeavor to meet the healthcare needs of Nigerians and the residents of Kaduna State.

Health Care Cost

Healthcare cost, a multifaceted construct, has garnered substantial attention in various studies, each offering unique perspectives on its nature, determinants, and implications. This conceptual clarification draws from diverse studies to illuminate the multifarious dimensions of healthcare cost, delving into factors shaping it and its ramifications on healthcare access, quality, and equity.

Healthcare cost encompasses the financial outlay required to provide medical services, encompassing a wide spectrum from preventive care to curative interventions. Such costs encompass direct expenses linked to medical treatments, medications, hospital stays, physician fees, and diagnostic procedures (Chou, Grossman and Saffer, 2004; Campbell and Ramsey, 2009). Moreover, it also extends to indirect costs like transportation, lost productivity, and associated societal expenditures (Smith-Spangler, Brandeau, Olkin and Bravata, 2010).

Various studies underscore the intricate web of factors influencing healthcare costs. They include technological advancements (Buxbaum and Reiss, 1999), population aging (Ebrahim and Smeeth, 2005), chronic disease prevalence (Lopez, Mathers, Ezzati, Jamison and Murray, 2006), administrative overheads (Woolhandler and Himmelstein, 2011), pharmaceutical pricing (Lichtenberg, 2005), and healthcare system inefficiencies (Eichner and Vollmer, 2011). Economic drivers and policy decisions further interplay

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in shaping cost trajectories (Cutler, 1995; Dor, Pauly, Eichleay and Held, 2007).

Studies highlight the interplay between healthcare cost and access, elucidating its potential to deter individuals from seeking care. High costs have been shown to hinder timely access (Dassah, Aldersey, McColl and Davison, 2018), especially among vulnerable populations (Johannes, Graaf, Blatt, George and Gonzalo, 2018). This can magnify health disparities, compromising equity and leaving marginalized groups underserved (National Library of Medicine, 2017).

The relationship between healthcare cost and quality underscores the 'cost-quality conundrum'. While higher expenditures may correlate with superior care quality (Burke and Ryan, 2014), excessive costs do not invariably guarantee superior outcomes (Fisher, Goodman, Skinner and Bronner, 2009). Studies underscore the importance of cost-effective interventions and the need for balancing cost considerations with desired patient outcomes (Hutubessy, Chisholm, Edejer, 2003; Wahlster, Goetghebeur, Kriza, Niederlander and Kolominsky-Rabas, 2015; Barber, Lorenzoni and Ong, 2019).

Multiple studies document the potential for healthcare costs to impose a substantial financial burden on individuals and households. Catastrophic health expenditures, wherein costs exceed a threshold percentage of household income, can push families into poverty (Aregbeshola and Khan, 2018). Such occurrences highlight the vulnerability individuals face in the absence of adequate financial protection mechanisms.

The role of policy interventions in mitigating healthcare cost burdens cannot be understated. Studies advocate for mechanisms such as health insurance (Kutzin, 2013), price controls (Langwell, 1993), value-based care (Langwell, 1993), and health system reforms (World Health Organization, 2010). These interventions seek to strike a balance between affordability, quality, and accessibility.

THEORETICAL LITERATURE

Health Belief Model (HBM)

The Health Belief Model (HBM), proposed by Rosenstock in 1966, is a psychological theory that explores individuals' perceptions of health risks and their likelihood of taking preventive actions based on those perceptions. According to the HBM, individuals are more likely to engage in health related behaviors if they believe they are susceptible to a health problem, perceive the problem as severe, believe that taking a specific action would reduce the risk, and view the benefits of the action as greater than the barriers involved (Rosenstock, 1966).

In the context of health insurance and healthcare costs, the Health Belief Model can elucidate why individuals choose to enrol in health insurance programs. Individuals who perceive themselves as vulnerable to significant healthcare expenses or who consider the financial burden of medical care to be severe may be motivated to seek protective measures, such as enrolling in health insurance. Additionally, the perceived benefits of health insurance in terms of reducing out-of-pocket expenses and providing financial security align with

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the HBM's principles (Rosenstock, 1966; Champion and Skinner, 2008).

EMPIRICAL LITERATURE

Bilger (2008) uses the decomposition analysis to measure progressivity, horizontal inequality, and re-ranking caused by health system financing in Switzerland. The research finds that despite a major reform, health system financing in Switzerland is still very regressive, and social health insurance is more regressive than direct financing. Zhong (2009) discusses the redistributive effect of healthcare finance in Canada. The study has used empirical data related to the healthcare financing system in Canada to illustrate their methods. Although, the study proposes an extension to the decomposition of the redistributive effect (RE) of healthcare finance, which allows for the measurement of the vertical, horizontal, and re-ranking effects of each component of the redistributive system. The study does not provide a specific conclusion or results section, but rather presents a new method for analyzing the redistributive effect of healthcare finance.

In analyzing equity in health care finance in Palestine, Abu-Zaineh, Mataria, Luchini and Moatti (2009) the urban and Lambert "upgraded-AJL Decomposition" approach to measure and decompose the total relative effect (RE) into vertical equity (VE), horizontal equity (HE), and reranking (RR). The paper also uses the bootstrap method to test the statistical significance of observed variations in the computed values of each of the above measures. The results show that out-of-pocket payments cause a statistically significant negative redistributive effect, making the financing system "pro-rich." On the other hand, government health insurance (GHI) and private health insurance (PHI) schemes have positive redistributive effects, but their magnitudes are quite marginal and statistically insignificant. The paper also finds that the majority of the "additional" increase in income inequality that is not due to "pure" vertical and horizontal inequities is due to re-ranking (RR).

Cavagnero and Bilger (2010) employed the DJA decomposition effects method to estimate the redistributive effect caused by health financing and the distribution of healthcare utilization in Argentina before and during the severe 2001/2002 economic crisis. The paper also uses a degree 3 polynomial regression with an Epanechnikov kernel and local plug-in bandwidth selection to estimate the function linking net income to gross income. The findings from the study found that the redistributive effect caused by health financing and the distribution of healthcare utilization in Argentina changed dramatically during the 2001/2002 economic crisis. The redistributive effect became much more positive, indicating a shift towards greater equity, and healthcare utilization shifted from pro-poor to pro-rich. The paper suggests that an integrated approach is required when monitoring equity, and that the Argentine health system appears vulnerable to economic downturns mainly due to high reliance on out-of-pocket payments and the strong link between health insurance and employment.

Bauhoff, Hotchkiss and Smith (2011) used a parametric regression discontinuity model to

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evaluate the impact of the Medical Insurance Program for the Poor (MIP) in Georgia on utilization and expenditure estimation. The analysis also uses a two-part model that replicates the structure of healthcare utilization to assess the impact of MIP on the number of visits and out-of-pocket expenditures. The results suggest that the program did not affect utilization of health services but decreased mean out-of-pocket expenditures for some groups and reduced the risk of high inpatient expenditures.

A descriptive cross-sectional study was conducted among 273 civil servants working at the Federal Secretariat, in Ibadan by Akinyemi, Owopetu, and Agbejule (2021) with regards to their perception and participation in the National Health Insurance Scheme in 2015. The results show that the awareness of NHIS among civil servants was high. The study also shows that the major reason most of the participants (50.5%) joined the Scheme was for the cheap and affordable health care services and free access to medical care. However, the study failed to show whether the insured patients experienced extra health care cost; and the differences between the cost they incurred and those not insured incurred.

Also, disparities in healthcare financing sources have been widely reported and are of great policy concern, particularly in developing nations like Nigeria. It is in this regards that Oburota and Olaniyan (2020) decomposed the inequalities in the healthcare financing sources in Nigeria and their impact on the distribution of income, where a high degree of income inequality exists, and medical expenses are typically paid for out-of-pocket (OOP) due to limited access to healthcare insurance. By employing the Duclos et al. decomposition framework for the investigation on data collected from two waves of the Nigeria General Household Survey (GHS) panel which encompassed 3,999 households in 2012–13 and 4,051 households in 2015–16. The study employed two measures of healthcare financing: OOP payment and healthcare insurance contribution (HIC), with household consumption expenditure serving as the ability-to-pay metric. The primary issue of inequity brought about by OOP payments was vertical inequity, while HICs created problems of vertical inequity, horizontal inequity, and reranking among households. In general, both options for healthcare financing were related to the exacerbation of income inequality at both the national and sectoral levels in the country. The operations of the National Health Insurance Scheme (NHIS) must be enhanced to ensure improved healthcare coverage for the impoverished. This paper satisfies a recognized need to determine the redistributive effects of social health insurance (SHI) contributions on income at national, urban, and rural locations over time.

Also, Adeniran, Aun, Fawole and Aboyeji (2020) carried out a comparative and retrospective study at Anchormed Hospital in Ilorin, Nigeria. The study involved women who had Caesarean Delivery (CD) at the hospital as out-of-pocket (OOP) payers or health-insured clients. By employing both descriptive and regression analysis, the results showed that among the 410 CD, 186 (45.4%) were health-insured, and 224 (54.6%) were OOP payers. The health-

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insured were mostly civil servants of high social class compared to OOP. The result also showed that the total amount paid for CD was significantly higher in the OOP payers. Further evidence also showed that clients insured under public insurance, recorded lower mean payment as reimbursement to the health facility, longer time interval from hospital discharge to payment, and were of lower social class.

Since the promotion of healthcare accessibility is crucial in reducing or eliminating such disparities, hence Lawanson and Opeloyeru (2019) examined the extent of equity in healthcare financing in Nigeria, utilizing waves 2 and 3 of the General Household Survey, and to determine the relative progressivity of each financing source. The Kakwani and Modified Kakwani indexes were employed to estimate the progressivity of out-of-pocket payments (OOP) and social health insurance. The findings reveal that there is a vertical inequity in healthcare financing, favoring the non-poor or pro-rich. Furthermore, the study discovered that OOP financing is regressive, while social health insurance demonstrates moderate progressivity. Given the potential for a more progressive healthcare financing approach to enhance the welfare and health status of the population, Nigeria would benefit from promoting health insurance as a means of eliminating inequity in healthcare financing.

METHODOLOGY

Research Design

The study considers the quantitative research design. The quantitative design processes data which could be quantified are numeric in nature. For example, the respondents' age, income, health care spending costs. By adopting quantitative design, the study aimed to generates factual and dependable outcome that can apply to a broader population.

Population of the Study

The participants the research aimed at are patients under the General-Out-Patient (GOPC) and Health Insurance Scheme in Barau Dikko Teaching Hospital (BDTH) for various medical consultations from March 01, 2024 (1:24:28 pm CET) to March 08, 2024 (5:58:51 am CET). Head count evidence showed that the population of GOPC per-week (covering only Monday to Friday) in BDTH average 1,000 patience, while Health Insurance Scheme patients are 175 on average.

This population was chosen because it was assumed to have adequate knowledge of the subject under investigation and the research variables under investigation.

Sampling Technique

In this study a purposive sampling, a non-probability sampling was employed in selecting respondents from the population. This technique enabled the study to give an opportunity to only eligible participants by selecting from the GOPC and Health Insurance Scheme patients within the population of the study. In this case, the researcher intention is to ensured that participants from different categories have equal chance to participate.

Sampling procedure

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This study employed cluster sampling and simple random sampling procedures. Cluster sampling was used to classify the respondents base on being insured or non-insured. Then simple random sampling was used to identify respondents in the different clusters.

Sample Size

The sample size was calculated using the formula for comparative study (Araoye, 2003) as adopted by Adeniran, Aun, Fawole and Aboyeji, 2020).

$$\frac{z^2 \times p \times q}{d^2}$$

where:

n = Sample size

z = Standard normal deviate set as 1.96 which corresponds to 95% confidence interval (CI).

P = Proportion in the target population estimated to have a particular characteristics i.e 0.05 (Adeniran, Aun, Fawole and Aboyeji, 2020).

q = 1.0 – p = 0.95

d = Degree of accuracy desired usually set at 0.05

Thus;

$$n = 1.\ \frac{96^2 \times 0.05 \times 0.95}{(0.05)^2} = 72.9 \approx 73$$

n = 73

Provision for attrition was 20% i.e 15. Thus, sample size of 73 + 15 = 88 is required for each arm of the study i.e the insured and non-insured patients.

Therefore, the total number of 176 participants was required for the study.

Instrument of Data Collection

The data in this study was collected using the questionnaire through interview guide. Information solicited by this instrument helped the researcher enhance responses from the self-administered questionnaires and this made it possible for the researcher to cross examine some key issues in the research. The choice of this instrument was made because it was considered a good method for producing data which dealt with the topic in depth. Interviewing was also a good method for producing data based on informants' priorities, opinions and ideas. Informants had the opportunities to expand their ideas, explain their views and identify what they regarded as the crucial factors considered self-administered questionnaires for the respondents.

To achieve this, the online Google Form questionnaire was utilized. The form has four (4) sections with questions in each section requiring participants' responses. Section A captured the demographic characteristics of the participants; section B captured questions relating to healthcare costs and insurance. Section C provides questions relating to the determinants of healthcare costs for both Patient groups, while section D captured questions that focus on healthcare utilization patterns. The data gathered were used to test the research hypotheses specified in the study.

RESULTS

Differential Healthcare Costs between Insured and Non-insured Patients in Barau Dikko Teaching Hospital in Kaduna

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In this segment, the study meticulously employed the t-test to analyze whether significant differences exist in healthcare costs between individuals under the health insurance scheme and those without. The tabulated data (Table 1) meticulously presents the results of this analysis.

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Table 1: Group Statistics and Independent Sample Test

	Are you currently enrolled in a health insurance program?	N	Mean	Std.D.	Std. Error mean					
On average, how much do you spend on healthcare services per month? (Naira)	Yes	105	2.15	0.928	0.081					
	No	38	3.11	0.894	0.145					
Independent Sample Test										
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std.Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
On average, how much do you spend on healthcare services per month? (Naira)	Equal variances assumed	2.086	0.151	-5.476	141	0.000	-0.953	0.174	-1.297	-0.609
	Equal variances not Assumed			-5.573	67.806	0.000	-0.953	0.171	-1.294	-0.612

Source: Field Survey, 2024. Estimated with SPSS version 25

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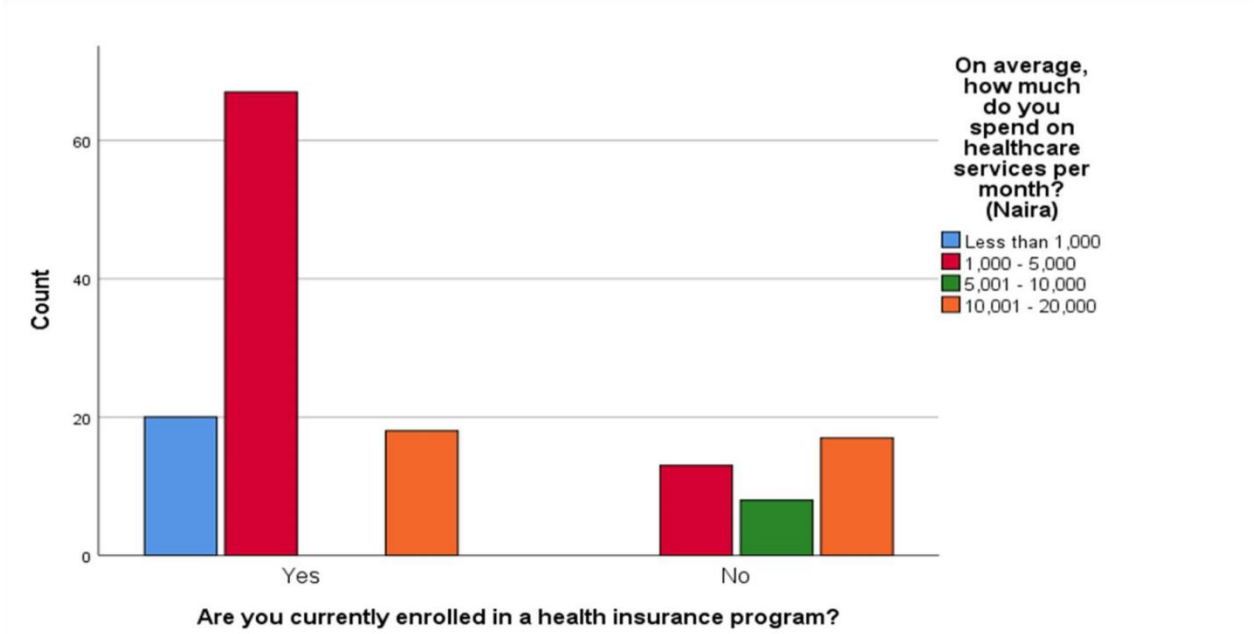

Figure 1: Spending disparities between Insured and non-insured patients

DISCUSSION

A close examination shows that in Table 1, among individuals enrolled in a health insurance program (Yes), the mean healthcare spending per month is ₦2.15, with a standard deviation of ₦0.928 and a standard error mean of ₦0.081. For those not enrolled in a health insurance program (No), the mean healthcare spending per month is higher at ₦3.11, with a standard deviation of ₦0.894 and a standard error mean of ₦0.145. This indicates that those enrolled in a health insurance program spend less than those that did not in Barau Dikko Teaching Hospital.

Among those enrolled in a health insurance program, 23.1% are covered by the National Health Insurance Scheme (NHIS). In comparison, 50.3% are enrolled in the Kaduna State Contributory Health Management Authority (KADCHMA) and non-enrolled under Private Health Insurance or any Community-Based insurance scheme, indicating a higher prevalence of KADCHMA coverage.

Furthermore, when assuming equal variances, the t-test indicates a significant difference in healthcare spending between the two groups, with a t-statistic of -5.476 and a p-value of 0.000. Similarly, when equal variances are not assumed, the t-test still shows a significant difference, with a t-statistic of -5.573 and a p-value of 0.000.

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The findings suggest that individuals enrolled in a health insurance program tend to spend significantly less on healthcare services per month than those not enrolled. This difference is statistically significant, indicating that health insurance coverage is associated with reduced healthcare spending among the surveyed individuals in Barau Dikko Teaching Hospital.

CONCLUSION AND RECOMMENDATIONS

Conclusion

In conclusion, the study conducted at Barau Dikko Teaching Hospital in Kaduna sheds light on the intricate dynamics between health insurance status, healthcare costs, utilization patterns, and individuals' perceptions of healthcare access. The findings reveal that individuals enrolled in health insurance programs tend to incur higher healthcare expenses, reflecting their access to a broader range of healthcare services. Despite this higher spending, insured individuals do not necessarily perceive significant improvement in the quality of healthcare received, suggesting potential gaps in healthcare service delivery.

Moreover, health insurance coverage shapes individuals' healthcare utilization behaviours. Insured individuals are more likely to seek medical care regularly and attribute their decision to access healthcare services to the availability of health insurance. Conversely, uninsured individuals face significant financial barriers, often resulting in delayed or avoided medical care due to concerns about affordability.

Recommendations

There should be concerted efforts by healthcare authorities and policymakers to promote health insurance coverage among the population, particularly among vulnerable groups such as low-income individuals and those with chronic health conditions. This can be achieved through targeted awareness campaigns, incentives for enrollment, and subsidies for premium payments to make insurance more affordable.

To address disparities in healthcare utilization and access, efforts should be made to expand healthcare options and increase the availability of affordable and accessible care, especially in underserved areas. This may involve the establishment of community health centers, mobile clinics, and telemedicine services to reach populations with limited access to traditional healthcare facilities.

Collaboration among healthcare stakeholders, including government agencies, healthcare providers, insurance companies, and community organizations, is crucial for successfully implementing healthcare access and affordability strategies. By working together, these stakeholders can leverage their resources and expertise to address the healthcare system's complex challenges and ensure better health outcomes for all individuals.

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