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THE EVOLUTION AND IMPACT OF SOCIAL HEALTH INSURANCE IN DEVELOPING COUNTRIES: A COMPREHENSIVE REVIEW

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ABSTRACT

Social Health Insurance (SHI) is crucial in enhancing healthcare accessibility, ensuring financial security, and improving health outcomes in developing nations. This review examines the development, influence, and challenges of SHI systems in developing countries. The National Health Insurance Scheme in Ghana and the Universal Coverage Scheme in Thailand exemplify the advantages of extensive coverage and inventive finance. Nigeria's National Health Insurance Scheme is encountering difficulties in expanding its coverage to include the informal and rural sectors. SHI programs have effectively decreased the incidence of illness and death, enhanced the consumption of healthcare services, and lessened the financial burden on individuals. Nevertheless, problems such as discrepancies in coverage, the ability to maintain financial stability, and fair and equal access continue to exist. To address these issues, it is necessary to enhance governance, raise public knowledge, invest in healthcare infrastructure, and adopt culturally sensitive approaches. Regular monitoring and assessment are necessary to optimize SHI systems for achieving universal health coverage and ensuring fair access.

KEYWORDS: *National Health Insurance, Social Health Insurance, Developing Countries, Developing Countries.*

1. INTRODUCTION

Health insurance is a mechanism that provides financial coverage for medical costs through contributions from people, employers, and governments. It offers financial security against expensive healthcare expenses, guaranteeing access to essential services without suffering financial devastation [1]. Health insurance redistributes the economic responsibility of medical expenses, rendering it more feasible, particularly in underdeveloped nations where direct payments can plunge families into destitution [2].

Social health insurance (SHI) is a crucial element of healthcare systems that aims to combine resources and allocate the financial risks related to healthcare [3]. SHI is a financing system for healthcare in which contributions are made by employers, employees, and occasionally the government [3]. Its purpose is to guarantee fair access to healthcare services and provide protection from overwhelming health bills [4].

Developing nations frequently encounter considerable difficulties in ensuring universal healthcare access due to limited resources, elevated poverty rates, and enormous healthcare demands [5]. SHI provides a method to extend health insurance to significant portions of the population, particularly those who are typically overlooked or underserved in mitigating health risks and shaping the distribution while aiming to achieve universal health coverage (UHC) [6,7]. This expansion has the potential to enhance health outcomes, mitigate the financial burden resulting from medical costs, and foster social stability and economic progress [8–11].

The inception of social health insurance in developing nations originated from diverse founding models and frameworks tailored to cater to the distinct health requirements and economic circumstances of these areas [12]. Initially, SHI programs were frequently influenced by systems implemented in developed countries but were modified to suit the specific circumstances of the local area [13]. Early adopter nations and initiatives established the groundwork for the subsequent expansion of SHI systems. For example, Ghana's National Health Insurance Scheme (NHIS), which was launched in 2003, has become a benchmark in Africa due to its comprehensive coverage and inventive methods of financing [14]. Rwanda's Community-Based Health Insurance (CBHI) system has demonstrated significant effectiveness in enhancing the utilization of health services and providing financial security for the impoverished population [15,16].

The evolution of SHI in developing nations has been characterized by notable modifications and policy changes. Throughout the years, numerous countries have implemented significant health insurance reforms with the goal of increasing coverage, ensuring financial stability, and improving the quality of services [17–19]. These policies have frequently been shaped by worldwide patterns and international organizations advocating

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for health insurance as a strategy to attain universal health care. Modifications made to suit specific socio-economic and political conditions in developing countries have resulted in a range of SHI schemes [20]. The Universal Coverage Scheme in Thailand, which was initiated in 2002, is a remarkable illustration of achieving almost complete health coverage [21]. This scheme exemplifies the substantial influence of SHI in promoting both fairness in health access and safeguarding against financial risks [22,23].

A comprehensive study is required to assess the changing state of SHI in developing nations. These schemes present many obstacles and have substantial effects on healthcare accessibility, usage, financial security, and overall health results. Developing countries encounter distinct socio-economic and cultural constraints that impede the effectiveness of SHI programs, necessitating a comprehensive understanding and resolution of these challenges. Although there have been significant attempts to put SHI into practice, there are remaining issues around coverage, financial sustainability, and fair access. This research seeks to offer significant insights and strategic recommendations to policymakers, healthcare providers, and stakeholders by conducting a thorough analysis of the evolution, effect, and challenges of SHI in different contexts. It is crucial to improve the design, execution, and efficacy of SHI schemes and enhance health outcomes in developing nations.

2. CURRENT LANDSCAPE OF SOCIAL HEALTH INSURANCE IN DEVELOPING COUNTRIES

In developing nations, SHI is divided into publicly supported and mixed models with private sector participation. Publicly sponsored models, such as Ghana's National Health Insurance Scheme and Thailand's Universal Coverage Scheme, offer extensive coverage to economically disadvantaged individuals. Mixed approaches, such as the Philippines' PhilHealth and Nigeria's National Health Insurance Scheme, integrate public and private sector contributions.

2.1 Ghana’s National Health Insurance Scheme

The National Health Insurance Scheme (NHIS) of Ghana was formed in 2003 as a replacement for the "cash and carry" system, which frequently resulted in financial obstacles to healthcare access [24]. The scheme ensures all Ghanaians have fair and reasonably priced access to vital healthcare services [25]. The main source of funding is the National Health Insurance Levy (NHIL), which is a 2.5% value-added tax imposed on specific goods and services [24,25]. Additionally, funding is also provided by the Social Security and National Insurance Trust (SSNIT), and workers in the informal sector and individuals who are not included in the SSNIT system are required to make premium payments that are determined by their income levels [25]. The NHIS provides an extensive range of benefits, encompassing outpatient treatments, inpatient care, mother and child health services, pharmaceuticals, and emergency care [26].

There has been significant growth since its inception, with membership coverage reaching 41% of the population in 2019. As of 2021, NHIS had 11.2 million users, covering 41% of the population. The scheme's enrollment increased from 1.3 million in 2005 to 10.8 million (36% coverage) in 2018 [27,28]. The introduction of mobile membership renewal in December 2018 likely contributed to the increase in membership in 2019, making it more convenient for members. This is a notable accomplishment, with the goal of augmenting enrollment and expanding access to vital healthcare services. Nevertheless, the system has not attained comprehensive coverage, and continuous efforts are required to reach the remaining population without insurance.

The Ghana NHIS faces coverage disparities across demographic and socio-economic groups, particularly for marginalized populations like the elderly and destitute. Income disparities also exist, with formal sector workers having higher enrollment rates than informal sector workers [29]. Subventions and efforts to reach out to low-income groups are essential for attaining fair and impartial coverage

2.2 Nigeria’s National Health Insurance Scheme

Nigeria's National Health Insurance Scheme (NNHIS) was established in 1999 to improve healthcare access and achieve universal health coverage. The scheme operates as a public-private partnership, combining contributions from the government, employers, and individuals to fund health services.

The NHIS is financed through payroll contributions from employees and employers in the formal sector, government subsidies, and premiums paid by individuals and families in the informal sector. Formal sector employees contribute 5% of their salaries, matched by an additional 10% from their employers [30]. The NNHIS provides healthcare services, including outpatient care, hospitalization, maternity care, preventive services, and medications. The National Health Insurance Authority (NHIA) oversees the scheme, ensuring compliance, managing funds, accrediting healthcare providers, and reimbursing them for services rendered [30].

However, significant gaps remain in expanding the coverage. As of recent reports, approximately 10% of Nigeria’s population, around 20 million people, are enrolled in the NNHIS [31]. Most of these enrollees are from the formal sector, where mandatory payroll contributions facilitate higher enrollment rates [32]. Efforts to extend coverage to the informal sector and rural areas have been challenging due to difficulties in collecting premiums and ensuring compliance.
The introduction of the NNHIS has led to notable improvements in healthcare access for its enrollees [33]. Members of the NNHIS are entitled to a predefined benefits package that includes a wide range of medical services, significantly reducing financial barriers to accessing healthcare, particularly for employees in the formal sector [34].

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The NNHIS has positively impacted healthcare utilization patterns in Nigeria, leading to increased use of preventive and curative services, such as outpatient services, maternal and child health services, and routine check-ups. However, challenges remain in expanding coverage to the informal sector and rural populations, as well as in ensuring equitable access to healthcare services across all demographic and socio-economic groups [35,36].

2.3 Thailand's Universal Coverage Scheme (UCS)

Thailand's Universal Coverage Scheme was established in 2002 to provide comprehensive health coverage to the entire Thai population [37]. The UCS aims to address gaps in coverage and access to care by providing universal health coverage, ensuring citizens have access to essential healthcare services without financial hardship. The scheme is primarily funded through general taxation, allowing it to provide services free at the point of use [38].

The combination of Thailand's three primary public health insurance programs, namely UCS, Civil Servant Medical Benefit Scheme, and Social Security Scheme, ensures that 99.5% of Thai citizens have access to healthcare coverage [39]. The UCS specifically encompasses around 75-80% of the Thai population, focusing on individuals who are not included in the other two primary schemes [40]. This accomplishment has been facilitated by a strong and comprehensive registration procedure that guarantees coverage for all citizens, irrespective of their socio-economic level or geographic location. The UCS has effectively decreased the number of uninsured individuals, guaranteeing that nearly all Thai citizens can obtain necessary health treatments [41].

The Universal Coverage Scheme in Thailand has significantly improved healthcare accessibility by establishing a comprehensive network of public hospitals, clinics, and community health centers [42]. The scheme's focus on basic healthcare has made the healthcare system more responsive to the population's needs [41]. It has led to a decrease in morbidity and mortality rates, particularly in maternal and child health. The UCS benefits package includes preventive care and chronic disease management, enhancing the well-being of patients with chronic conditions and reducing long-term healthcare costs [42]. This has made healthcare more affordable and accessible, especially for low-income households.

The UCS aims to provide equitable healthcare coverage for diverse demographics, particularly rural and low-income communities, while addressing quality and long-term healthcare sustainability issues despite notable achievements [42].

3. IMPACT OF SOCIAL HEALTH INSURANCE

3.1 Healthcare Access and Utilization of Healthcare Access

Healthcare access in developing countries has been greatly enhanced by social health insurance plans, which effectively diminish financial obstacles to receiving care. These programs allow a larger number of individuals to access medical care without the concern of exorbitant expenses, which used to be a common deterrent before the implementation of these programs [43]. In Thailand, UCS has abolished user fees while receiving healthcare services, leading to improved accessibility to healthcare for both urban and rural communities [44]. The NHIS in Ghana has effectively increased the availability of crucial healthcare services by providing coverage for a significant proportion of the population. This has particularly benefited vulnerable groups such as children, pregnant women, and the elderly [24]. Studies conducted under the SHI plan have demonstrated a favorable impact on the enrolment rates of chronically ill patients in comparison to the general population, suggesting that these individuals have a higher rate of enrolment [45–48].

The implementation of SHI has modified the patterns of healthcare utilization, resulting in an increased frequency of healthcare service [49]. Social health insurance systems often experience an increase in the use of primary and preventive healthcare services. In Vietnam, the implementation of SHI led to a rise in the number of visits to public healthcare facilities for both outpatient and inpatient care [49]. In addition, insured individuals reduced their trips to private facilities by 0.39-0.51 visits per year, while increasing their visits to public facilities by 0.88-1.70 visits. SHI was correlated with a higher frequency of medical treatment visits and health check-ups. The universal coverage scheme in Thailand encourages primary care as the primary contact for health issues, promoting timely diagnosis and management, and reducing tertiary care burden [50]. This suggests a change towards a greater emphasis on preventive and regular healthcare utilization. In addition, studies under SHI schemes revealed positive effects on healthcare utilization with one study showing that persons who possessed health insurance had a 29% greater likelihood of receiving treatment for hypertension in comparison to those individuals who had normal blood pressure [51–53].

3.2 Health Outcomes Effects on Rates of Illness and Death

Social health insurance programs have effectively reduced morbidity and mortality rates by enhancing accessibility to prompt and sufficient healthcare treatments. The NHIS in Ghana has been linked to decreases in child and maternal death rates, which can be attributed to improved availability of maternal healthcare and immunization services [54]. Similarly, in Thailand, the UCS has played a role in enhancing health outcomes by reducing death rates for both communicable and non-communicable diseases [40]. This improvement can be attributed to the enhanced availability of healthcare services and pharmaceuticals [55].

3.3 Financial Protection: Decrease in Out-of-Pocket Expenses

A key advantage of social health insurance is the substantial decrease in personal expenses for healthcare services. This decreases aids in mitigating the economic strain on households, hence enhancing the affordability and availability of healthcare

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[56]. The implementation of the UCS in Thailand resulted in a significant reduction in direct payments for healthcare. The UCS provides coverage for a wide range of healthcare services, both inpatient and outpatient, hence reducing the financial burden on individuals [57]. Similarly, in Ghana, the NHIS has mitigated the need for individuals to pay for important health services and pharmaceuticals out-of-pocket, as these costs are now covered by the scheme [58].

Social health insurance plans offer essential safeguards against exorbitant healthcare costs, which have the potential to cause severe economic distress or even plunge households into poverty [59,60]. Through the consolidation of resources and the distribution of financial liability among the insured population, these schemes guarantee that people are not burdened with excessive medical expenses. The UCS in Thailand has successfully prevented medical bankruptcies by providing coverage for expensive treatments and hospital stays, which are frequently the main reasons for overwhelming healthcare costs [44]. The NHIS in Ghana provides comparable safeguards, guaranteeing that individuals are not financially devastated by unforeseen medical crises [24].

Social health insurance significantly impacts healthcare access, utilization, health outcomes, and financial protection. It reduces financial barriers, encourages preventative and primary care, and improves health outcomes. It also provides financial security by reducing out-of-pocket costs. Case studies from Thailand, Ghana, and Nigeria show the significant impact of social health insurance on health equity and results in developing countries.

4. CHALLENGES AND STRATEGIES FOR IMPROVEMENT

Social Health Insurance schemes in developing countries frequently lack sufficient coverage for the impoverished and vulnerable sectors of society. This is primarily due to multiple barriers, including inflexible poverty definitions, fragmented schemes, limited awareness, geographical isolation, and cultural preferences for traditional remedies. Research conducted in five African nations has revealed problems related to the precise classification of those living in poverty, the division of social health insurance systems into smaller parts, and the decrease in financial support provided by one group to another [61]. PhilHealth in the Philippines has faced challenges in terms of inadequate awareness campaigns, geographical isolation from healthcare facilities, and cultural inclinations toward traditional remedies [62]. Similarly, there is little empirical data to support the claim that India's Rashtriya Swasthya Bima Yojana (RSBY) effectively reduces the financial burden on impoverished households [63]. To tackle these problems, a few measures are suggested: enhanced governance and firm political dedication, campaigns to raise awareness and educate the public, care services located in the community, systems that are easy for users to navigate, and investment from the government. Fragmented social health insurance schemes and risk pools diminish the efficacy and durability of SHI programs, constraining the ability to redistribute funds and complicating the management of financial risks across various population segments.

Financial aid initiatives such as China's Medical Financial Assistance (MFA) have not effectively supported impoverished individuals in participating in SHI schemes and alleviating their financial hardships [64]. To tackle this issue, the Chinese government should allocate additional resources towards MFA programs to guarantee increased participation rates among those from low-income backgrounds, as well as enhance the scope of benefits offered through MFA financial assistance.

The efficacy of SHI schemes in reaching impoverished individuals is impeded by geographical isolation and cultural obstacles. Allocating resources to enhance the healthcare infrastructure, specifically in distant and countryside regions, can enhance the accessibility of healthcare services. Overcoming these barriers can be achieved by implementing culturally sensitive programs and incorporating traditional therapeutic methods alongside modern healthcare procedures.

Furthermore, certain SHI programs, like India's Rashtriya Swasthya Bima Yojana (RSBY), do not have substantial data to support their effectiveness in decreasing the financial burden on impoverished people. It is essential to have strong monitoring and evaluation systems to consistently evaluate the effects of SHI schemes on out-of-pocket expenses and financial security.
Social Health Insurance plans have a substantial influence on the utilization of health facilities and the associated expenditures. In Kenya and Ghana, the implementation of SHI resulted in increased affordability of healthcare services. However, a significant number of registrants were still required to make co-payments. This was mostly owing to their limited knowledge of the accreditation status of healthcare providers and the benefits they were entitled to. As there seems to be trust in private healthcare, the coverage should be expanded to cover more private care. As well as promote knowledge of diseases and preventative healthcare practices to sustain the good impact of NHIS [65,66].

The implementation of Urban Employee Insurance (UEI), Urban Resident Insurance (URI), and New Cooperative Medical (NCM) schemes in China resulted in a rise in the consumption of health services and an increase in overall health expenditures [67]. Nevertheless, none of them substantially decreased the amount of money paid directly by the individual. Essential ways to address these difficulties include implementing cost management strategies, establishing standardized pricing, setting limits on service prices, and closely monitoring service consumption. The Federal Staff Scheme for Health Insurance Program (FSSHIP) in Nigeria proved to be inefficient in achieving universal financial risk protection and fell short of ensuring universal health coverage. It is essential to enhance the role of primary care in controlling access to healthcare, establish effective referral mechanisms, and broaden the scope of coverage.

5. CONCLUSIONS

The assessment of Social Health Insurance in emerging nations reveals substantial advancements in enhancing healthcare accessibility, financial security, and overall health results. Ghana, Nigeria, and Thailand have implemented diverse SHI models, which offer unique insights into the difficulties and achievements of broadening healthcare coverage. The examples of Ghana's NHIS and Thailand's UCS demonstrate how the implementation of extensive coverage and inventive finance strategies can successfully enhance the number of people enrolled in the programs and the consumption of healthcare services. Nevertheless, there are ongoing difficulties, such as discrepancies in coverage, the ability to maintain financial stability, and ensuring fair and equal access. The Nigerian NHIS has made progress in enhancing healthcare accessibility but has challenges in extending coverage to the informal sector and rural regions. Obstacles such as poverty, fragmented institutions, and cultural barriers hinder the success of SHI projects. To address these difficulties, a comprehensive strategy is needed, which involves improving governance, conducting public awareness campaigns, investing in healthcare infrastructure, and implementing culturally relevant healthcare programs. Enhancing monitoring and evaluation procedures is essential for the ongoing assessment of the impact of SHI projects. To attain universal health coverage and ensure equal access to healthcare and financial protection for all, particularly underprivileged people in developing nations, policymakers and stakeholders should prioritize enhancing the design, implementation, and efficacy of SHI schemes. By undertaking these initiatives, SHI has the potential to make a substantial impact on social stability, economic advancement, and enhanced health results in emerging nations.

Declaration of competing interest

The authors declare that there are no competing financial interests.

Compliance with ethical standards

Research involving human participants and/or animals

No human participants or animals were involved in this research

Author Contributions

Fahad Ahmed Ismail: Conceptualization, Formal analysis, Writing.

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