

An Investigation on the key Issues and challenges in meeting the Health Objectives in sustainable development goals in Ghana



Research Article

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**Introduction:** The collective global dedication of nations to enhance human welfare was reinforced by a consensus among countries to pursue the objectives outlined in SDG3 and its associated targets. Nonetheless, while Ghana has committed to the SDG agenda, its journey towards fulfilling SDG 3 has been marked by inconsistencies due to ongoing institutional, financial, and obstacles hindering progress toward health-related goals. This study assessed the key issues and challenges influencing the implementation of SDG 3 in Ghana, emphasising practical methods of implementation, participation in discussions between public and private actors, and regional discrepancies in health outcomes.

**Methods:** A qualitative methodology was used to collect data through 30 comprehensive interviews with academics, nurses, other healthcare practitioners, and local government representatives operating within the Greater Accra Region. Although data were collected

in the Greater Accra geographical area, participants described their understanding of how national and regional implementation was progressing. Data were analysed via thematic analysis with NVivo 12 software, in accordance with open-ended data, axial, and selective coding; selected high-salience themes were then further summarised using basic descriptive statistics to increase analytical clarity.

**Results:** Ghana has established various mechanisms under SDG 3, including a nationwide Health Insurance scheme, community-oriented essential service delivery systems, and initiatives aimed at achieving health coverage and disease monitoring goals. However, these mechanisms are limited by delayed and insufficient financing, health workforce shortages, logistical constraints of implementation, poor enforcement of policies, and poor coordination among implementing institutions. Stakeholder participation was described as wide in structure but disjointed in practice, with centralised decision-making and limited participation of frontline health workers; gaps in health infrastructure, workforce distribution, and access to critical health services at the regional level remain a real issue.

**Conclusion:** The conclusion draws that In Ghana, the attainment of SDG 3 demands enhanced financing mechanisms, institutional coordination, inclusive stakeholder involvement, and focused interventions to address regional inequities in health system provision.

**Keywords:** Sustainable Development Goals; SDG 3; Health Systems; Stakeholder Engagement; Ghana

## 1. Introduction

The Sustainable Development Goals (SDGs) were embraced by member states of the United Nations in 2015, marking a renewed commitment to tackling ongoing development

challenges via an integrated framework (United Nations, 2015). Among these 17 goals is Sustainable Development Goal 3 (SDG 3), which concentrates on fostering healthy lives and overall well-being for people of all ages. Health has continued

to play a dominant role within the SDG framework, both as a developmental outcome and as a crucial determinant of progress in meeting other goals, including poverty reduction, education, gender equality, and economic growth (World Health Organization, 2018).

Before the establishment of the SDGs, many African nations struggled to meet the targets set forth by the Millennium Development Goals (MDGs), especially those concerning child mortality, maternal wellness, and communicable diseases (Oleribe et al.,2016). These failures were largely attributed to systemic challenges, such as weak health systems, poor governance, and limited financial resources (Travis et al., 2004).Progress towards reaching targets outlined under SDG 3 has been inconsistent, particularly within lower-middle-income countries like Ghana which continually confront structural financial governance constraints (WHO,2019; World Bank,2020; Oleribe et al.,2019).

Sub-Saharan Africa has been noted to be affected more by preventable causes, such as maternal and child mortality, communicable diseases, and a growing

burden of non-communicable diseases (Agyepong et al., 2017; WHO, 2019).To align its national development strategies with Agenda2030, Ghana has initiated several reforms in its health sector, including implementing the country's Health Insurance Scheme(NHIS) and Community Level-Oriented Health Services(CHPS) programs, leading to improvements across select health indicators, such as skilled attendance during childbirth, vaccination rates, and malaria management.

Despite numerous international pledges geared towards fulfilling developments under SGD3, steady growth toward achieving established benchmarks remains uneven, especially among low-middle income countries, where healthcare systems frequently encounter multifaceted structural fiscal administrative difficulties (Oleribe et al.,2016; World Bank,2020).Ghana has shown sustained political commitment to the SDG agenda over the years and has implemented several health sector reforms aimed at improving access to healthcare services for the population.

Nevertheless, progress thus far remains inconsistent, even amidst rising

incidence rates of preventable maternal-child fatalities and infectious ailments, along with pervasive burdens stemming from non-communicable conditions, despite global endorsement of policy commitments (WHO,2019; Agyepong et al.,2017). However, reports available at the national level indicate mixed and uneven outcomes across SDG 3 indicators, with persistent challenges frequently related to maternal mortality, regional inequalities, and health system sustainability.

Sub-Saharan Africa continues to be affected differently by the above challenges, even though global commitments and policy frameworks exist (WHO, 2019).

This study investigated the implementation of SDG 3 in Ghana, focusing on various institutional mechanisms, stakeholder involvement,

### **1.1 Primary Objective of the study**

To Probe the current state of SDG 3 since its implementation and examine the mechanisms put in place for its attainment.

### **1.2 Secondary Objectives of the study**

and specific contextual factors that shape implementation outcomes. By adopting a qualitative, stakeholder-centred approach, this study sought to move beyond the usual practice of indicator-based assessments done in previous studies and provide an in-depth understanding of how SDG 3 commitments are translated into practice and implementation. The study looked at SDG 3 which is related to health objectives and their related indicators for implementation and achievement by 2030. The study focused on investigating pitfalls relating to the attainment of health-related objectives, processes, and mechanisms which stakeholders in the health sector used in this regard. Challenges and successes were highlighted as determined by the gaps that have arisen, and steps were devised to address these problems.

- a) To explore the mechanisms implemented to attain SDG 3 in Ghana.
- b) To analyse stakeholders' involvement in attaining SDG 3.

c) Examine the status of SDG 3 achievement in the 16 administrative regions of Ghana.

## 2. Literature Review

Implementing Sustainable Development Goal 3 (SDG 3) to achieve healthy lives and well-being for all must not be viewed within a narrow framework of policy commitment alone but requires the successful translation of global health initiatives across national and local health systems. Implementation science offers theoretical and methodological tools for understanding the mechanisms by which health interventions are adopted, operationalised, and sustained within complex systems (Peters et al., 2013; De Savigny & Adam, 2009). The field contributes to connecting evidence to practice by identifying barriers and facilitators that affect the delivery of health policies and programs in real-world settings (Peters et al., 2013).

For a more systematic analysis of the study, research and literature were reviewed through implementation

science frameworks to explain why policies work or do not work in practice. Implementation Science tries to bridge the “know–do gap” in which policy is designed to generate real results but only works if it is followed through in reality by analysing institutional capacity, stakeholder interactions, and contextual obstructions. One such framework is the precede–proceed model, which provides a systematic framework for planning and evaluating health interventions by connecting desired outcomes to the behavioural, environmental, and policy determinants that underpin these outcomes (Green & Kreuter, 2005).

The model, therefore, highlights participatory engagement and contextual analysis and demands that interventions be rooted in the community, as opposed to being top-down decisions. Intervention mapping also outlines a systematic approach for developing evidence-based health programs by determining the factors that influence behaviour and identifying relevant treatment approaches. In LMICs, application

frameworks also call attention to context, infrastructure, governance quality issues, and fragmented means of financing.

These factors also significantly affect the sustainability of health and development programs. The use of such conceptual frameworks to evaluate SDG implementation allows researchers to transition from descriptively examining the effects of policy on the health system to causally explaining the effects. Recent research in global health underscores the need to tailor implementation science models to LMIC contexts. Resource constraints, fragmentation in governance, and infrastructure constraints in health systems in such settings must be addressed and assessed in a contextually specific manner (Kruk et al., 2018; Mills, 2014). Without these adjustments, policies which are well formulated are likely to fail at implementation despite being well grounded in theory. Together, these frameworks offer a critical analytic framework for studying SDG 3 implementation. They emphasise the role of governance

structures, stakeholder engagement, institutional capacity, and contextual factors in determining whether the performance of health interventions will be effective (Gilson, 2012).

New literature underlines this by stressing that advances in the Sustainable Development Goals will demand integrated, multisectoral approaches combining health, economic development, and social equity. Key barriers to SDG implementation have been identified in a recently published systematic review on SDG implementation, including unstable finance, weak data systems, weak institutional capacity, and lack of cooperation and/or integration from all sectors. This new approach highlights the growing importance of innovation and institutional interdependence for achieving SDG results across economic, societal, and environmental scales.

Likewise, in Africa, studies have proven the importance of community-level engagement, key actor collaboration, and financing mechanisms for the continuity of

health intervention performance. Interactions between multiple stakeholders, such as government ministries, international organisations, civil society groups, healthcare providers, and local communities, also play a significant role in the implementation of SDG 3. Nonetheless, these relationships are commonly moulded by disproportionate power hierarchies that impact policy settings and the execution of results (Brinkerhoff & Bossert, 2014; Shiffman, 2007). These findings highlight the need to analyse and understand implementation issues at institutional and community levels with policy considerations. A substantially deeper analysis of the effects of health could also be aided by a presentation of how governance and finance constraints are translated into health outcomes.

Public health funding delays often disrupt health service delivery. Health facilities depend on stable and predictable funding streams to obtain critical medicines, maintain infrastructure, and fund outreach programs. Time delays in financing

can lead to stock-outs of medicines and diagnostic supplies, impairing the capacity of care to be delivered (Dieleman et al., 2017; Evans and Etienne, 2010). Such shortages can lead to delayed treatment, worsening disease complications, and higher mortality rates.

Weak government departments frequently result in ineffective coordination among ministries, insufficient monitoring systems, and a lack of translation of national policies into local implementation. The implementation of science literature characterizes this as the policy-implementation gap, in which policies adopted officially do not translate to expected outcomes because of institutional limitations. Another dimension is the power relations between stakeholders. SDG implementation may include interaction between national governments, local authorities, international development agencies, NGOs, and community groups.

The realisation of SDG 3 requires engagement with multiple actors that have power, such as government

ministries, international organisations, civil society, the health sector, and the local population. However, these affiliations are frequently influenced by power imbalances, affecting policy agendas and implementation outcomes (Brinkerhoff & Bossert, 2014; Shiffman, 2007). Power differentials also shape the setting of agenda, resource allocation, and policy agenda: donor priorities drive national health policy, local communities may not have strong capacity to shape program development, and civil society actors may not have the institutional advantage to lobby for disadvantaged groups. Understanding these dynamics can help explain to some extent why some interventions function well and others do not even occur with the right policy frameworks in place.

The term intersectionality is a useful way of considering the complex ways in which social injustices intersect to shape health. The following intersecting factors were included: gender, income level, education level, rural–urban residence, and disability status. Through an intersectional

analysis, this study allowed for heterogeneous effects of policy intervention across population strata, providing stronger analytic rigor and policy sensitivity.

This study treats mental health stigma and sanitation as key variables for quantitative analysis because both are critical but frequently under-prioritised determinants of population health. Mental health stigma was selected because it significantly influences health-seeking behaviour. Stigmatising attitudes can discourage individuals from accessing mental health services, resulting in untreated conditions that affect social functioning, productivity, and overall well-being (Aikins, 2018; Badu et al., 2018).

In many LMIC health systems, mental health remains underfunded despite growing recognition of its importance (WHO, 2022). Sanitation was chosen as it is a fundamental determinant of health, especially with respect to infectious diseases.

Poor sanitation contributes to the spread of diarrheal diseases, cholera, and other waterborne illnesses that

disproportionately affect vulnerable populations (Prüss-Ustün et al., 2014). Therefore, improvements in sanitation infrastructure could provide substantial public health value.

These two variables jointly account for the social and environmental determinants of health, creating a holistic view of the broad health challenges to the full-spectrum achievement of SDG 3. The incorporation of mental health stigma and sanitation into quantitative analyses could potentially be justified through alignment with SDGs, as both are directly linked to key SDGs, mental health conditions, and SDG 3 (Good Health and Well-being) and SDG 6 (Clean Water and Sanitation). These areas are integral to public health and social welfare. High impact for society Mental health stigma decreases help-seeking behaviour, leading to untreated mental illness and loss of economic productivity.

Poor sanitation is also a component of infectious disease transmission, especially in the worst-off parts of the globe. Countries with the weakest health systems: Governments need to

focus on strengthening health system financing mechanisms to ensure predictable and timely funding for health services. Transparent budgeting processes and financial accountability can minimise delays in disbursements and increase public trust in health organisations through financial reporting (Agyepong et al., 2012). Integrating mental health services into primary healthcare systems also promotes improved access to care while destigmatising mental health service use. It is essential for policies to promote workforce training, community outreach programs, and culturally appropriate mental health programs to support the implementation of appropriate care (WHO, 2022).

(Stakeholder-specific policy recommendations) National authorities must establish more predictable and transparent health finance mechanisms to ensure that SDG implementation can be embedded in national development planning. Enhanced surveillance on digital health platforms. Local governments should endeavour to enhance programs that build community

participation, the local effectiveness of programs by training communities, and the allocation of programming resources. International agencies must link funding cycles to national policy timeframes and promote capacity instead of transient project funding. Civil society organisations can support and advocate for the disenfranchised and launch awareness campaigns on mental health stigma and sanitation

### 3. Methodology

This study utilised a qualitative research approach, as it enabled a comprehensive contextual analysis (Yin, 2018; Creswell and Poth, 2018). Qualitative designs are particularly well-suited to the study of intricate policy implementation processes, stakeholder interaction, and governance dilemmas (Creswell, 2014) to be explored through qualitative methods. The structure offered detailed and contextualised insights into how SDG 3 policies and programmes were produced and experienced by the relevant decision-makers in Ghana. The study adopted an interpretivist paradigm, whereby social reality was assumed to be

procedures among communities to raise awareness. Even well-designed policies risk falling flat without actionable pathways. Key barriers include institutional fragmentation, inadequate funding, weak data systems, low levels of community engagement, and political instability. Overcoming these barriers demands multilevel coordination and sustained energy from every sector.

socially constructed, and understanding it is generally through the meanings and experiences of actors affected by the phenomena (Tuli, 2010).

The study was conducted in Ghana, a lower-middle-income country located in sub-Saharan Africa with concrete policy intentions to achieve the Sustainable Development Goals. The participants included stakeholders with responsibility for the development of health services for SDG 3 on the planning, coordination, and delivery, ranging from policymakers, health administrators, development partners,

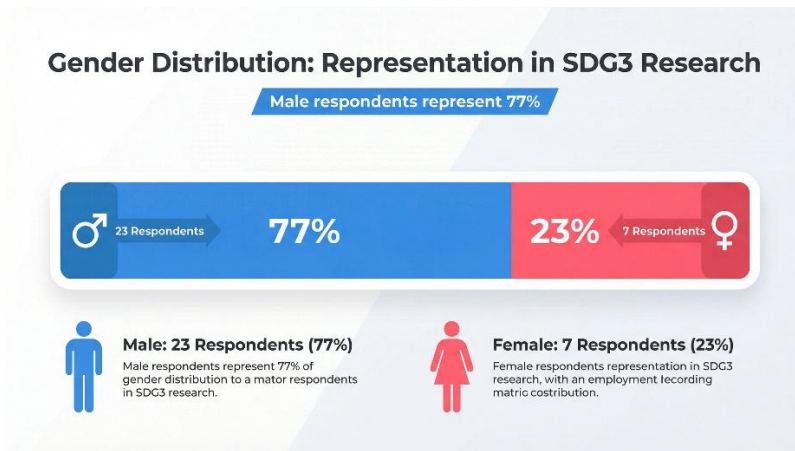
civil society institutions, and frontline health staff (Agyepong et al., 2017).

Participants were purposively sampled based on their relevant, firsthand, rich SDG 3 implementation knowledge and experience, as well as those who decided that they were willing to participate in the interview. Semi-structured interviews were utilised to permit flexibility in questioning and consistency between interviewees. (Patton, 2015).

The sample size was determined by data saturation, defined as when new substantive themes ceased to emerge from the interviews (Guest, Bunce & Johnson, 2006). Sampling proceeded until saturation occurred which indicated that no recent substantive themes had emerged (Guest et al., 2013). Secondary data were collected from policy documents, national health reports, and international databases. Multidimensional datasets were triangulated across sources, thereby strengthening the credibility of the findings (Yin, 2018; Bowen, 2009).

Interview data were supplemented by documentary analysis where appropriate. The study reviewed national health policies, findings from both national health policies, progress against the SDGs and Governmental reports, state and national reports, health strategic planning, and strategic frameworks such as international health plans, for example, published by international bodies and worldwide public agencies.

Audio recordings were transcribed verbatim, and the transcriptions were imported into NVivo12 qualitative data analysis software to enable systematic coding and organisation using thematic analysis. In addition to the thematic data, a quantitative dimension was introduced by converting the chosen NVivo codes into numeric indicators for analysis and using descriptive statistics. The quantitative data provided patterns of distribution, percentages, and frequency distribution of key themes in the dataset of the study.



**Figure 1: Gender composition of the study participants**

Figure 1 above illustrates the gender composition of the study participants involved in the interviews. The distribution shows that respondents

included both male(77%) and female (23%) stakeholders engaged in SDG 3 implementation across different professional backgrounds.



**Figure 2: Occupational categories of the respondents**

Figure 2 above presents the occupational categories of the respondents who participated in the study. The sample consisted of academics and researchers, nurses and other health practitioners, and local government officials. Academics formed the largest group,

Local government officials contributed perspectives related to district-level planning, public administration, and development policy implementation. The diversity of occupational backgrounds

contributing expertise in health systems research, epidemiology, and public health policy. Nurses and healthcare practitioners provided practical insights from frontline health service delivery, particularly in community health and maternal care.

strengthened the study by incorporating viewpoints from both policy-level and operational actors involved in SDG 3 implementation.

<b>Table 1: Total participants summarized in categories</b>				
<b>Participant Category</b>	<b>Number (n)</b>	<b>Average Years of Experience</b>	<b>Range of Experience</b>	<b>Key Area of Expertise</b>
Academics / Researchers	15	14 years	7–25 years	Health systems research, health economics, epidemiology
Nurses / Health Practitioners	8	11 years	5–20 years	Community health, maternal health, primary care delivery
Local Government Officials	7	13 years	6–22 years	District planning, public administration, development policy
<b>Total Participants</b>	<b>30</b>	<b>12.7 years</b>	<b>5–25 years</b>	Multisectoral SDG 3 implementation experience

As shown in Table 1, the participants had significant practice-related experience in SDG 3 implementation, with an average of 12.7 years across sectors. Academics offered perspectives on health system policy and research evidence, and the experience of nurses on the frontline of service delivery contributed to the discussion. Local government officials provided perspectives on decentralised planning and implementation. Combining these perspectives provided depth to this study, offering insights at both the policy design and operational implementation levels.

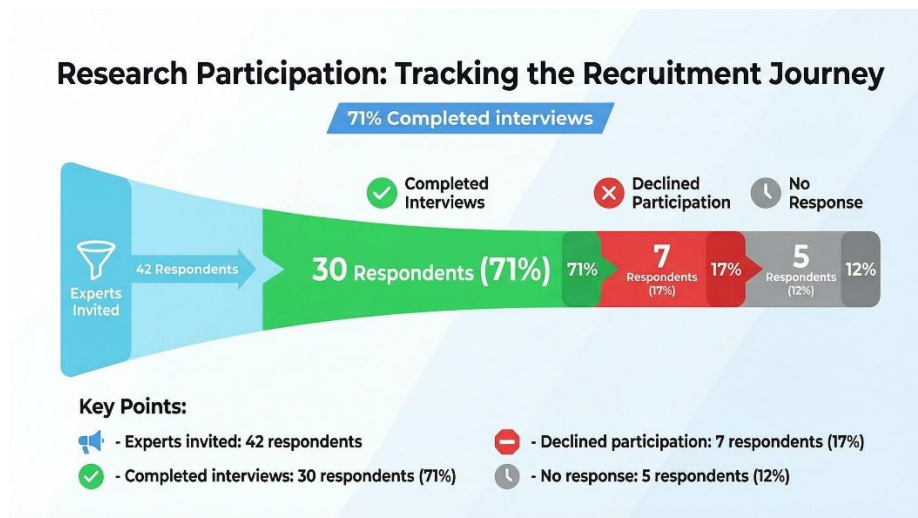
### **3.2 Recruitment Procedures**

Participants were selected using purposive sampling methods. Participants were initially selected based on their expertise in public health policy, healthcare management, and development planning associated with implementing SDG 3 in Ghana. Invitations were sent via email and telephone, outlining the purpose of the study and guaranteeing anonymity.

### **3.3 Participants Response Rates**

A total of 42 potential participants were contacted. A Total of people wanted to participate, with 71% responding (response rate). Seven

declined due to scheduling limitations, and five did not respond to the invitation (see Figure bellow 3).



**Figure 3: Recruitment process used to select participants for the study.**

Figure 3 illustrates the recruitment process used to select participants for the study. A total of 42 potential participants were initially contacted through email and telephone invitations.

Of these, 30 individuals agreed to participate in the interviews, resulting in a response rate of approximately 71%. Seven individuals declined participation due to scheduling constraints, while five did not respond to the invitation.

### 3.4 Detailed Coding Protocols

#### Coding Procedure

The interview recordings were transcribed verbatim and imported into the qualitative analysis software NVivo 12. The analysis proceeded using a six-stage thematic analysis method.

1. Data familiarisation – repeated reading of transcripts.
2. Initial coding: line-by-line coding of meaningful text segments.
3. Code categorisation – grouping similar codes into broader categories.
4. Theme development – identification of overarching

themes related to SDG 3 challenges.

5. Theme review: Cross-checking themes against the original data.

6. Theme definition and interpretation – linking themes to governance, financing, and system capacity issues.

### 3.5 Inter-Coder Reliability Assessment

Where discrepancies emerged, the codes were discussed and refined through an iterative review of the coding framework.

### 3.6 Reflexivity Statement (Researcher Bias)

The researchers were experienced in quality assurance and public sector institutional processes. This background provided a contextual understanding of governance structures in the health system. However, this presents the risk of inducing interpretive bias in institutional explanations for SDG 3 challenges related to implementation. To mitigate this risk, reflexive memo writing was employed throughout the analysis process, and coding decisions were periodically checked with the original transcripts to reflect the participant narratives of interpretation rather than researcher

assumptions, and triangulation of interview data with policy documents and existing literature.

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NVivo codes into numeric indicators for analysis and using descriptive statistics. The quantitative data provided patterns of distribution,

### 3.7 Primary Objective of the study

To Probe the current state of SDG 3 since its implementation and examine the mechanisms put in place for its attainment.

### 3.8 Secondary Objectives of the study

- a) To explore the mechanisms implemented to attain SDG 3 in Ghana.
- b) To analyse stakeholders' involvement in attaining SDG 3.
- c) Examine the status of SDG 3 achievement in the 16 administrative regions of Ghana.

### 3.9 Limitations

Data availability and access to key stakeholders limited this study. However, triangulation of data

## 4. Results

### Objective 1: Mechanisms to Attain SDG 3 in Ghana

The first objective explored the mechanisms adopted by Ghana to attain SDG 3. The analysis revealed that

percentages, and frequency distribution of key themes in the dataset of the study.

sources was used to ensure the validity and reliability of the study findings (Creswell and Plano Clark, 2018).

The study was constrained by the fact that data were mainly collected in Greater Accra, which limited the generalisability of certain findings. There were some broad contextual insights, nonetheless: participants' national-level roles and use of secondary data provided more detail. The qualitative nature, sample size(n=30), and purposive sampling limit statistical generalisability; however, a superficial analysis of basic descriptive statistics further enriched the analysis.

participants consistently referred to national health policies and frameworks (such as the NHIS and UHC roadmap),

community-level interventions (such as CHPS compounds), surveillance and laboratory systems, and digital and supply chain innovations. While participants recognised these as

## Themes and Sub-Themes

### Theme 1: Health Policies and Frameworks

#### Policy and Legal Frameworks

The findings indicate that Ghana has developed several policies and legal instruments aligned with SDG 3. Participants identified national health policies, sector strategic plans, and SDG integration frameworks as key implementation mechanisms. These frameworks provide direction for aligning national health priorities with the global SDG targets. However, participants reported that while policy frameworks exist, their translation into effective action remains inconsistent. Several participants noted gaps between policy formulation and implementation, particularly at the sub-national level.

“The policies are there, but implementation on the ground is not

important pillars, they also expressed concerns that their impact was hampered by funding constraints, staff shortages, logistical challenges, and weak enforcement mechanisms.

always consistent with what is written.”  
(Respondent R4)

#### Health Financing Mechanisms

Participants highlighted the National Health Insurance Scheme (NHIS), budget allocations, and donor funding as critical financing mechanisms facilitating SDG 3 implementation. The NHIS has been widely described as being central to improving access to essential health services.

Despite its importance, participants consistently reported challenges related to inadequate funding, delayed reimbursements, and overreliance on external support.

“Funding remains a major challenge. Sometimes programmes are designed without guaranteed resources.”  
(Respondent R7)

#### Service Delivery Mechanisms

Key service delivery mechanisms employed include public health facilities, outreach initiatives, and Community-Based Health Planning Services (CHPS) approaches. Participants highlighted community-based health planning services as critical for expanding access to healthcare, particularly in underserved communities.

However, limitations such as infrastructure deficits, staff shortages, and logistical constraints have been reported to affect the effectiveness of service delivery.

- *Transcript 2 (Academic, Health Economics)*: “Progress is visible through NHIS expansion. The real issue delays in reimbursement, which discourage providers.”
- *Transcript 30 (Academic, Health Systems)*: “Policies like the UHC roadmap exist, but staff attrition undermines continuity.”

Participants largely agreed that Ghana had adopted credible health frameworks that aligned with global SDG priorities. However, NVivo coding demonstrated that terms such as “delays”, “attrition”, and “enforcement” dominated this node,

indicating that implementation weaknesses were the most pressing concerns. This points to what is termed an “implementation gap”, where the distance between policy design and execution creates significant slippages. This suggests that Ghana’s challenge lies not in the absence of policy frameworks but in ensuring their durability and consistent application across regions of the country.

## **Theme 2: Community-Level Mechanisms (CHPS Compounds)**

- *Transcript 3 (Nurse, Community Health)*: “CHPS compounds and NHIS support help, but logistics shortages slow outreach.”

NVivo analysis showed that references to CHPS were frequently coded with terms such as “shortages” and “resources”. Nurses repeatedly emphasised that while CHPS compounds provide a lifeline for communities, their performance is fragile and heavily dependent on staff and resource availability.

## **Theme 3: Surveillance and Laboratory Systems**

- *Transcript 5 (Academic, Noguchi):* “Operational research partnerships support implementation, yet funding is low.”
- *Transcript 14 (Academic, Biomedical Sciences):* “Diagnostics are improving, but weak genomic surveillance is a gap.”

The NVivo query matrices revealed that academics overwhelmingly raised surveillance and laboratory systems, whereas nurses and local government officers mentioned them infrequently. This suggests that knowledge of Ghana’s surveillance infrastructure is concentrated among specialists, highlighting a possible communication gap between researchers and implementers.

#### **Theme 4: Digital and Supply-Chain Innovations**

- *Transcript 19 (Academic, Pharmacy):* “Cold-chain storage improved, but last-mile distribution is still weak.”

Participants viewed digital innovations such as drone deliveries and electronic logistics management as progressive but insufficient to resolve systemic challenges. NVivo word frequencies showed repeated mentions of “*last-mile*”, “*distribution*”, and “*cold-chain*”.

These mechanisms reflect Ghana’s commitment to SDG 3. However, their effectiveness is undermined by funding shortages, weak human resource capacity, and fragile logistics issues. NVivo analysis revealed a near-universal recognition of these mechanisms and a consensus on their weaknesses. The challenge, therefore, is not policy absence but policy sustainability and equitable implementation across all regions

#### **Objective 2: Stakeholder Involvement in Attaining SDG 3**

The second objective was to examine how stakeholders are engaged in the design, implementation, and monitoring of SDG 3 in Ghana. Participants consistently mentioned multiple actors: ministries, agencies, donors, academia, NGOs, and local governments. However, they also highlighted that engagement is

fragmented, poorly coordinated, and unequal, with some actors having more power and voices than others.

## Themes and Sub-Themes

### Government Institutions

Government institutions were identified as the primary drivers of SDG 3 implementation. Participants noted that national-level agencies play a dominant role in planning, coordination, and monitoring. However, several participants indicated that decision-making processes were highly centralised, with limited input from regional and district-level actors.

“Most of the decisions are taken at the national level, and implementation actors are expected to follow.” (Respondent R2)

### Civil Society Organisations (CSOs)

Civil society organisations contribute through advocacy, community engagement, and service delivery support. Participants acknowledged the importance of CSOs in reaching out to vulnerable populations and promoting accountability. Despite this, CSOs were perceived to have limited influence over

policy decisions, with their involvement often confined to consultation and implementation support rather than agenda setting.

### Partners in Development and the Private Sector

Key contributors identified providing funds, technical assistance, and program support as crucial for nurturing intervention activities. Participants noted that donor support plays a significant role in sustaining SDG 3 interventions. Private sector involvement was reported to be emerging but limited, particularly in preventive health and rural service delivery.

### Theme 1: Breadth of Stakeholder Engagement

- *Transcript 6 (Academic, Health Policy):* “Frameworks exist, but weak accountability limits impact. Our research guides reforms when taken seriously.”

While participants identified a wide variety of stakeholders, NVivo analysis showed that accountability-related references were overwhelmingly negative in nature. Academics pointed to

the under-utilisation of their research, while local governments complained about resource constraints. Meanwhile, nurses felt that their contributions were largely overlooked.

## Theme 2: Financing and Budgeting Power

- *Transcript 2 (Academic, Health Economics):* “We influence health financing mainly through budget hearings, but uptake is inconsistent.”

This theme underscores the centralisation of fiscal powers. Academics can provide evidence during budget hearings, but the adoption of their recommendations depends on political priorities. Nurses and local government officers rarely mentioned budget influence, confirming that fiscal decision-making power is concentrated at the National level.

## Theme 3: Decentralization and Local Autonomy

- *Transcript 4 (Local Gov Worker, AMA):* “We integrate SDG 3 in medium-term plans, but decentralization is weak.”

Local officials described the gap between planning authority and financial autonomy as follows: NVivo coding revealed that “planning” and “resources” were frequently co-coded, reflecting a mismatch between responsibilities and means. As a result, local governments cannot meaningfully implement SDG 3, creating a situation in which decentralisation becomes administrative rather than substantive.

## Theme 4: Exclusion of Frontline Staff

- *Transcript 22 (Public Health Nurse):* “Policies expand school health programs, but research institutions rarely work directly with us.”

Nurses consistently described themselves as being excluded from policymaking. NVivo searches revealed that terms such as “*excluded*” and “*not consulted*” were prominent in the nurse transcripts. This exclusion reduces morale and wastes valuable knowledge. From a governance perspective, this reflects the failure of co-production, which is central to participatory approaches. Policies that exclude

frontline workers risk being detached from the realities of their implementation.

The stakeholder environment for SDG 3 in Ghana is inclusive in structure but exclusive in practice. NVivo comparisons showed that academics focused on evidence, local governments on resource gaps, and nurses on exclusion. This fragmentation creates parallel but disconnected participatory streams. As the Ghana SDG Report (2020) observed, broad participation exists, but coordination and accountability are weak. To accelerate SDG 3, Ghana's stakeholder engagement must evolve from symbolic consultation to shared responsibility and co-accountability.

### **Objective 3: Status of SDG 3 Achievement in the Regions**

The third objective examined Ghana's performance across its 16 administrative regions. Although the interviews were conducted in Greater Accra, the participants reflected on national patterns. They pointed to progress in communicable disease control and maternal-child health but highlighted gaps in NCDs, mental health, sanitation, and rural-urban equity. Findings indicate

significant regional variations in SDG 3 implementation outcomes across Ghana

### **Regional Disparities in Health Infrastructure and Workforce**

Participants reported an uneven distribution of health facilities, equipment, and skilled health personnel across regions. Rural and less-developed regions experience greater challenges in accessing quality healthcare services.

“Some regions struggle with basic infrastructure, while others are relatively well-resourced.” (Respondent R9)

Although the interviews were conducted in Greater Accra, the participants drew on national-level responsibilities and secondary data to describe broader regional patterns.

### **Accessing Health Services**

Access to health services by citizens varies considerably by location. Distance to facilities, affordability, and availability of skilled personnel were identified as key determinants influencing access. Participants noted that these disparities affect progress toward achieving SDG 3

targets, particularly among vulnerable populations

### Descriptive Statistics

This strengthens the evidence base by complementing the thematic findings with a basic descriptive summary of high-salience issues. Two prominent qualitative codes were transformed into binary indicators (0 = not mentioned, 1 = mentioned) and summarised using frequencies and percentages across the full interview dataset (n = 30). The purpose is not to claim population prevalence but to provide an indication of how widely key barriers and gaps recur within the dataset before proceeding to a

deeper narrative interpretation for a better understanding of the dataset.

### Data transformation and descriptive procedure

Two codes that emerged strongly from the dataset were set towards summarisation. These were (a) mental health stigma and (b) sanitation and disease co-mentioning. Each transcript was coded to determine whether the theme appeared at least once. The resulting binary variables were summarized using descriptive statistics, then displayed in a frequency table and simple bar and pie chart visuals.

Table 2 below shows Frequencies of selected SDG 3 status and gap themes

*Frequencies of selected SDG 3 status and gap themes (n = 30)*

<b>Table 2: Frequencies of selected SDG 3 status and gap themes</b>				
<b>Theme (coded from interviews)</b>	<b>n (Mentioned)</b>	<b>% (Mentioned)</b>	<b>n (Not mentioned)</b>	<b>% (Not mentioned)</b>
Mental health stigma mentioned	12	40.0	18	60.0
Sanitation and disease co mentioned	14	46.7	16	53.3

**Note.** “Mentioned” indicates that the theme appeared at least once in a participant’s transcript. Counts were based on a qualitative dataset (n = 30).

Table 3 shows that sanitation-related health concerns and mental health stigma are not isolated remarks but recurrent constraints that cut across a sizeable share of this dataset. Their importance is better understood when read alongside the conceptual and empirical foundations in the literature review section.

***(a) Sanitation and disease co-mentions: structural determinants and SDG interdependence***

The dataset indicates that **46.7%** of the interviews linked sanitation with disease outcomes. This pattern strongly supports the argument that SDG 3 performance cannot be evaluated only through service delivery indicators because health outcomes are tightly coupled to upstream determinants. The interdependence of SDG 3 with other SDGs is made explicit, including the direct links to the provision of better sanitation and clear sources of water (SDG 6) and environmental

conditions as determinants of disease risk.

Methodologically, the fact that nearly half of the transcripts naturally co-located sanitation with disease indicates that participants do not treat sanitation as a peripheral development issue. Instead, they frame SDG 3 progress as being structurally constrained by environmental health conditions that are partly outside routine clinical care.

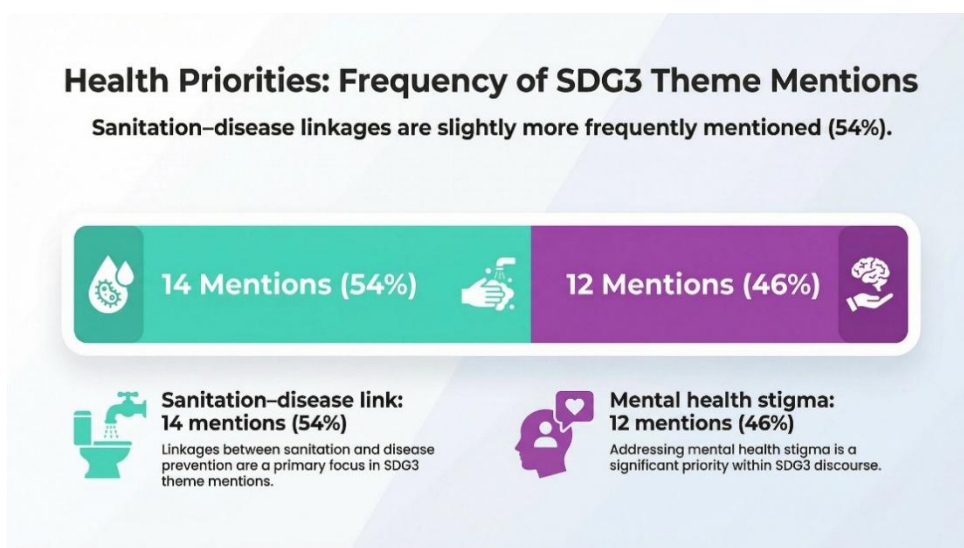
Another implication is that sanitation-related constraints can undermine the gains made in communicable disease control. SDG 3 targets combating water-borne and other communicable diseases, reinforcing why sanitation can remain a persistent bottleneck if environmental risks are not reduced.

***(b) Mental health stigma: why “socially sensitive” targets lag even when other areas improve***

Mental health stigma was present in 40.0% of the interviews, with the results noting that stigma was coded across 12 transcripts. This finding is particularly meaningful because mental health and non-communicable diseases are difficult

SDG 3 targets. Stigma is not only a cultural phenomenon but a practical barrier that can suppress early help-seeking, delay treatment, and reduce adherence, thereby weakening system effectiveness even when services exist. In this light, the presence of stigma in the dataset provides internal support for the position that mental health-related SDG 3 targets are structurally difficult to attain.

Regarding mental health, stigma has the effect of compounding constraints that interact with limited resources, service scarcity, and weak prioritisation. Therefore, the 40.0% prevalence is evidence that stigma is a meaningful, repeated barrier within stakeholder accounts and plausibly contributes to persistent under-performance areas (see Figure 4 below)



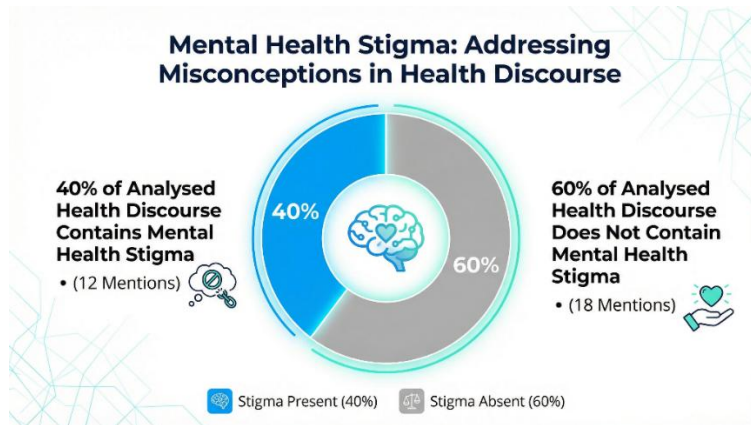
**Figure 4: frequency distribution of two key themes**

Figure 4 presents the frequency distribution of two key themes identified during the qualitative analysis: mental health stigma and sanitation-related disease concerns. The chart summarises how often these themes

appeared across the interview transcripts. Sanitation and disease co-mentions were identified in 14 out of 30 interviews (46.7%), while mental health stigma appeared in 12 interviews (40.0%)

Sanitation and disease co-mentions appeared slightly more frequently than stigma. This aligns with the existing framework that SDG 3 is interdependent

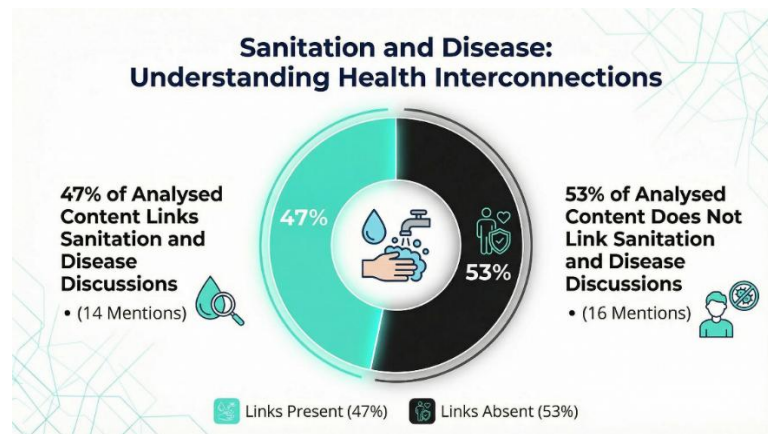
with determinants such as clean water and sanitation, and that environmental conditions shape communicable and water-borne disease burden.



**Figure 5: Proportion of interview participants who mentioned mental health stigma**

Figure 5 illustrates the proportion of interview participants who mentioned mental health stigma as a barrier to achieving SDG 3 health objectives. The chart shows that 40.0% of respondents referenced stigma related to mental health conditions, while 60.0% did not explicitly mention the issue. Above shows chart of mental health stigma

mentioned (Yes or No). A 40.0% mentioned rate indicates that stigma is not marginal in the dataset. This correlates with suicide and NCD mortality reduction as among the least likely targets to be achieved globally by 2030. The salience of stigma supports that socially sensitive targets remain difficult to address without deliberate policy, financing, and service integration.



**Figure 6: proportion of participants who are linked to sanitation disease**

Figure 6 presents the proportion of participants who linked sanitation conditions with disease outcomes during the interviews. The results show that

46.7% of respondents mentioned sanitation and disease together, while 53.3% did not explicitly make this connection.

With almost half of the transcripts linking sanitation to disease, the pattern supports the framework that SDG 3 is inseparable from SDG 6 and other determinants and that controlling water-

borne diseases and related communicable burdens depends on improvements that often sit outside routine clinical care.

Both themes had substantial Yes counts, which justify treating them as major constraints in the subsequent qualitative explanation. This pattern also supports the argument that SDG 3 progress is shaped by multi-factor causal pathways and interlinked determinants, such as

sanitation, while difficult targets, such as mental health and suicide reduction, remain areas where progress is slower and uneven (Fullman et al., 2017; Fong, 2022).

### Themes and Sub-Themes

## Theme 1: Gains in Communicable Diseases and Maternal Health

- *Transcript 17 (Midwife, Ridge Hospital):* “Skilled deliveries increased, yet urban-rural gaps remain.”

The participants consistently recognised improvements in immunisation, malaria reduction, and maternal health outcomes. NVivo frequency analysis showed frequent mentions of “*skilled delivery*” and “*immunization*”. These gains reflect decades of donor support and the implementation of national programs. However, participants also stressed that rural areas remain underserved, suggesting that progress is uneven and inequitable.

## Theme 2: Lagging NCDs and Mental Health

- *Transcript 9 (Academic, Epidemiology):* “Ghana is progressing, but epidemiological transitions are being ignored.”
- *Transcript 26 (Psychiatric Nurse):* “Awareness improved, but stigma and drug shortages persist.”

Participants warned that NCDs and mental health remain neglected issues. NVivo coding confirmed that “stigma” was coded in 12 transcripts, mostly by nurses. This suggests that mental health services remain marginal, despite being central to the SDG 3. The existing literature highlights that mental health and NCDs are among the least likely targets to be achieved globally by 2030. This represents a blind spot in SDG 3 implementation in Ghana.

## Theme 3: Sanitation and Environmental Health

- *Transcript 18 (Env. Health Officer):* “Open defecation and poor drainage drive disease; we need stronger enforcement.”

Local officials consistently link sanitation with health outcomes. NVivo co-coding showed that sanitation and disease were coded together in 14 transcripts. The Ghana SDG Report (2019) also identified sanitation as one of the weakest indicators. This indicates that SDG 3 cannot be achieved without addressing sanitation as a structural health determinant.

## Theme 4: Urban–Rural Disparities

Participants emphasised that rural communities are disadvantaged. Role-based queries revealed that nurses and local officials were more likely to raise this issue, reflecting their proximity to underserved populations. The persistence of these disparities highlights Ghana's equity challenges. The WHO (2018) stresses that without reducing inequities, SDG 3 progress will remain partial. This means that urban gains may mask rural stagnation, creating a misleading image of national progress.

## Theme 5: Weak Surveillance and Data Flows

- *Transcript 24 (Academic, Epidemiology):* “Surveillance is valued, but regional units lack staff.”

Participants repeatedly noted the weak data systems outside Accra. NVivo coding showed frequent co-occurrence of “surveillance” with “staff shortages.” This undermines Ghana's ability to track SDG 3 progress. Without accurate data, health policies risk being reactive rather than evidence-driven.

## Disparities in Regional Health System Capacity

While the interviews took place in the Greater Accra Region, participants often referred to national trends of health system inequalities across Ghana's 16 administrative regions. Interview narratives and secondary data indicate considerable regional inequities in health infrastructure, workforce distribution, and access to services.

The most significant implementation challenges were consistently identified as follows:

- Northern Region
- Upper East Region
- Upper West Region
- North East Region
- Savannah Region

These regions were described as facing the following issues:

- Limited health infrastructure
- Shortages of skilled health personnel
- Longer travel distances to health facilities

- Lower availability of diagnostic services
- There are greater poverty and sanitation challenges

**Table 3: major health system challenges across regional categories and their implications for SDG 3 attainment.**

Region Category	Key Challenges	Implications for SDG 3
Northern Belt (Northern, Upper East, Upper West)	Workforce shortages, weak infrastructure, rural dispersion	Reduced access to maternal and primary healthcare services
Newly Created Regions (Savannah, North East, Oti)	Institutional capacity limitations, administrative restructuring	Slow expansion of health programs
Urban Regions (Greater Accra, Ashanti)	Higher service availability but population pressure	Health facility congestion and unequal access
Middle Belt Regions (Bono, Eastern, Western)	Moderate service coverage with logistical constraints	Uneven service delivery between rural and urban districts

As participants pointed out, urban regions such as Greater Accra and Ashanti benefit from higher concentrations of tertiary health facilities complemented by specialists, whereas northern regions face structural disadvantages. Such disparities create uneven progress toward SDG 3 indicators, including

maternal mortality reduction, immunization coverage, and access to skilled health workers in the country. In light of such regional imbalances, the need for targeted health system investments to ensure equitable progress toward the 2030 SDG targets is evident.

The overall picture of progress on SDG 3 in Ghana is mixed and uneven. Gains in communicable diseases and maternal-child health are offset by stagnation in NCDs, mental health, and sanitation. Urban-rural disparities remain wide, and weak surveillance impedes accurate monitoring. Ghana's performance is strongest in donor-supported sectors and weakest in domestically financed or socially sensitive sectors. This discrepancy risks only partially meeting the target for SDG 3 by 2030. The results showed the following:

1. Ghana has adopted credible mechanisms, such as the NHIS, UHC roadmap, CHPS, laboratory systems, and digital innovations. However, their effectiveness is undermined by financing delays, staff shortages and logistical fragility.
2. Stakeholder involvement is broad in structure but is fragmented in practice. Academics provide evidence, local governments plan without resources, and nurses implement policies but are excluded from the design.
3. SDG 3 progress is uneven: communicable disease and maternal health outcomes have improved, but NCDs, mental health, sanitation, and rural-urban disparities remain weak.
4. Ghana has established multiple policies, financing, and service delivery mechanisms aligned with SDG 3.
5. The effectiveness of implementation is constrained by funding limits, coordination challenges, and capacity gaps.
6. Stakeholder involvement is broad but uneven, with decision-making being largely centralised.
7. Significant regional disparities persist in access to health services, infrastructure, and workforce.

## 5. Discussions

### Mechanisms for Implementing SDG 3 in Ghana

The study revealed that insufficient and unpredictable health financing remains a constraint on the effective implementation of SDG 3. This finding aligns with previously published research that characterised financing gaps as an important barrier to universal health coverage in sub-Saharan Africa (Kutzin, 2013; McIntyre, Meheus & Røttingen, 2017; WHO, 2019). Delays in payment to the National Health Insurance Scheme (NHIS) in Ghana negatively impact service provision and motivators of provision. Previous research indicates that structural weaknesses remain throughout health financing arrangements with similar challenges (Blanchet, Fink, and Osei-Akoto 2012; Dalinjong and Laar 2012; Alhassan, Nketiah-Amponsah, and Arhinful 2016).

The Ghana SDG Report (2020) reveals that although the Ghanaian government has increased access to

the NHIS, its financial sustainability has been compromised amid poor reimbursement and overdependence on relatively limited funding sources (Government of Ghana Report, 2020). This reinforces the idea that the real challenge in Ghana is not the lack of frameworks but ensuring that they are durable and uniformly applied within regions.

Studies have also found that resource dependence hinders CHPS success, noting how weak supply chains generally affect the intended net effect of CHPS. CHPS compounds embody the equity intent of SDG 3 to reach marginalised populations, but under-resourcing means that they sometimes increase inequities by short-changing their intended beneficiaries.

### 5.3 Stakeholder Involvement in SDG 3 Implementation

The findings point to substantial shortages and inequitable access to the supply of trained health workers, especially in rural and deprived areas. This parallels regional and global evidence that the maldistribution of

the health workforce poses an important barrier to reaching SDG 3 targets (Campbell et al., 2013; Agyepong et al., 2017; WHO, 2020).

The existing literature has highlighted that in the absence of explicit policies to recruit and retain health workers from historically impoverished areas, inequalities in health are likely to persist (Dussault & Franceschini, 2006; Oleribe et al., 2019). The study shows that stakeholder involvement in SDG 3 action in Ghana is wide-ranging but limited in depth across the country.

Although several committees and stakeholder platforms exist, their effects are diluted by weak accountability mechanisms and limited joint decision-making (Government of Ghana, 2019). This observation reinforces Oliver et al.'s (2018) concept of the ongoing “know–do gap” in health policy, where consultation does not lead to co-decision-making.

#### **5.4 Regional Disparities in SDG 3 Implementation**

This research uncovers enduring and regional variations in SDG 3 implementation in Ghana, particularly in health infrastructure, qualified health personnel, and service delivery. Rural and underdeveloped areas are disproportionately affected, representing larger structural inequalities in the nation's development landscape (Domfeh et al., 2012; UNDP, 2015). The findings corroborate a strong body of literature associating geographic disparities in health with differences in resource allocation, labour supply, and infrastructure. Such imbalances undermine the imperative to “leave no one behind” in SDG 3. (Kyei-Nimakoh et al., 2016; WHO, 2018).

Although national-level indicators might show progress, disparities between regions and sub-nationals may be concealed, contravening the global compact of “Leave No One Behind” which is central to the SDG and its goals (United Nations, 2019). The study's results demonstrate the necessity for equity-sensitive SDG implementation strategies that are: investment directed to specific

investments; devolved decision-making structures, responding to country-specific conditions and constraints. The results show gross regional disparities in SDG 3 implementation, with significant inequity in access to health infrastructure and services. For sustainable delivery of SDG 3, diverse domestic financing, a better NHIS payment system, and integrated monitoring systems are needed (WHO, 2017; UNDP, 2016). Targeted investments in and capacity development for district-level health authorities are also needed to address these regional disparities.

These findings have significant implications for health policy and SDG implementation in Ghana. First, enhancing inter-institutional coordination is essential for the existing instruments of SDG 3 to be useful. Clearer role definitions, improved information-sharing systems, and integrated monitoring frameworks may reduce duplication and create clearer policies. Second, funding constraints can be mitigated through alternative, more sustainable,

and diversified sources of funds to complement ongoing healthcare programs.

## 6.0 Conclusion

While advances toward SDG 3 have been made in Ghana, there are still significant implementation bottlenecks. These challenges are related to structural deficiencies in health funding, human resource allocation, governance capacity, and information systems (Agyepong et al., 2017; WHO, 2019; World Bank, 2020). These enduring health inequalities and the changing burden of disease highlight the reality that no effective current interventions are available to achieve the targets of SDG 3 by 2030 in the absence of significant policy and system reform (Kruk et al., 2018; Oleribe et al., 2019).

As Ghana approaches the SDG3 deadline in 2030, this imbalance raises questions regarding sustainability and equity. SDG 3 attainment in Ghana is uneven across regions and health domains: progress in communicable disease control and maternal and child health starkly

contrasts with stagnation in the treatment of non-communicable diseases, mental health, sanitation-related health outcomes, and rural-urban equity.

Trends confirm significant structural and social determinants intertwined with other targets, such as clean water and sanitation (SDG6).

Stakeholder participation is wide but fragmented: Although a variety of actors partake in the formal project on the implementation of SDG 3, decision-making is highly centralised. Local governments are frequently given implementation jobs without financial independence, and frontline health workers, such as nurses, are generally marginalised in policy design. This is at odds with the co-production process, reduces practice-learning capacity, and strains the responsive value of policy to local contexts. In contrast, while such mechanisms exist, the study concludes that Ghana's progress towards achieving SDG 3 is predominantly a result of implementation failures, not policy voids. Ongoing delays in accessing

financing, human resource limitations, logistical fragility, and uneven enforcement undermine the effectiveness and sustainability of various health interventions. A notable cause affecting the results is the difference between national policy design and sub-national execution.

## 7.0 Recommendations

Based on these conclusions, this study proposes the following recommendations:

1. Strengthen inter-institutional coordination mechanisms. Government should enhance coordination among ministries, departments, and agencies involved in SDG 3 implementation through clearer role definition, integrated planning frameworks, and regular inter-agency review platforms.
2. Improve sustainable health financing.

There is a need to strengthen domestic resource mobilisation for health, improve efficiency in health expenditure, and ensure timely and adequate funding for

- key SDG 3 interventions, particularly at sub-national levels.
3. Enhance decentralisation and local-level capacity. Empowering regional and district health authorities through increased fiscal autonomy, technical capacity-building, and data-driven planning can improve implementation effectiveness and responsiveness to local needs.
  4. Promote inclusive stakeholder participation  
Mechanisms should be established to meaningfully involve civil society organisations, community leaders, and frontline health workers in planning, implementation, and monitoring of SDG 3 initiatives.
  5. Strengthen monitoring, evaluation, and accountability systems  
Improved data collection, reporting, and feedback mechanisms are necessary to track progress, identify implementation bottlenecks, and ensure accountability across all levels of SDG 3 implementation.
  6. Adopt equity-focused implementation strategies. Targeted interventions should be prioritised for underserved and high-need regions to address disparities in health service access, infrastructure, and workforce distribution.
  7. Strengthening health financing systems: Improving the timeliness and predictability of NHIS reimbursements and reducing over-reliance on donor funding.
  8. Enhancing Human Resource Capacity: Address staff shortages and attrition through improved incentives, training, and deployment strategies, particularly in underserved regions.
  9. Promote Inclusive Stakeholder Co-production: Institutionalise mechanisms that involve frontline health workers, local governments, and civil society in policy design and monitoring.
  10. Address Structural Determinants of Health: Integrate SDG 3 strategies with sanitation, environmental health, and mental health interventions.

11. Improve Surveillance and Data Systems: Strengthen regional surveillance capacity to support evidence-based decision-making and equitable monitoring of SDG 3 's progress.

12. Strengthening coordination mechanisms:

The Ministry of Health should institutionalise formal inter-sectoral coordination platforms to enhance collaboration among government agencies, civil society organisations, development partners, and the private sector in SDG 3 implementation.

13. Improving health financing:

Government should ensure timely disbursement of funds to health sector institutions and explore sustainable financing strategies to reduce dependence on external donor support.

14. Addressing regional disparities:

Targeted investments should be directed toward underserved regions to improve health infrastructure, workforce availability, and access to essential services.

15. Enhancing stakeholder engagement:

Sub-national health authorities should be empowered through capacity-building initiatives to improve local-level planning, implementation, and monitoring of SDG 3 interventions.

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