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INTERNATIONAL RESPONSE TO HIV/AIDS PANDEMIC: THE CASE OF NATIONAL HIV/AIDS CONTROL PROGRAMME IN GHANA

BY

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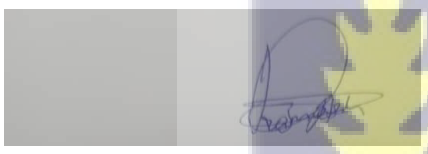
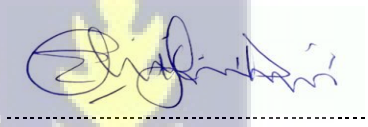
DECLARATION

I, Benjamin Sena Dzameshie, declare that this thesis is my original work and that all sources have been accurately reported and acknowledged, and that this document has not been previously in its entirety or in part submitted at any university in order to obtain an academic qualification.





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DEDICATION

This thesis is dedicated to all healthcare workers and individuals working tirelessly to combat HIV/AIDS in Ghana and globally.

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LIST OF ABBREVIATIONS

AIDS - Acquired Immune Deficiency Syndrome

ART - Antiretroviral Therapy

FGD - Focus Group Discussion

GAC - Ghana AIDS Commission

HIV - Human Immunodeficiency Virus

IDI - In-depth Interview

NACP - National HIV/AIDS Control Programme

PEPFAR - President's Emergency Plan for AIDS Relief

PLHIV - People Living with HIV

RHD - Regional Health Directorate

UNAIDS - Joint United Nations Programme on HIV/AIDS

WHO - World Health Organization

ABSTRACT

The HIV/AIDS pandemic continues to pose a significant global health challenge, with sub-Saharan Africa bearing highest burden. This study evaluates the international response to the epidemic, focusing on the National HIV/AIDS Control Programme (NACP) in Ghana. Using a mixed-method approach, the research examined current trends, challenges, and effectiveness of interventions in Ghana's HIV response. The study revealed that despite significant progress in antiretroviral therapy coverage and reduced mortality, challenges persist including stigma, inadequate funding, and gaps in service delivery, particularly in rural areas. The research identified key barriers to effective HIV control and proposed evidence-based recommendations for improving program outcomes.

Key findings highlight the need for enhanced community engagement, sustainable funding mechanisms, and strengthened health systems to achieve HIV elimination targets. The study contributes to the broader understanding of HIV/AIDS control strategies and provides practical insights for policy makers and healthcare providers.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Human Immunodeficiency Virus (HIV) is a condition caused by the human immunodeficiency virus, which weakens the immune system and compromises the body's ability to combat infections and diseases (World Health Organization [WHO], 2023). HIV/AIDS remains one of the leading infectious diseases globally. To date, an estimated 40.4 million [32.9–51.3 million] deaths have occurred due to HIV-related causes (WHO, 2023a). The African region continues to bear the greatest burden, accounting for over two-thirds of the global population living with HIV (PLHIV), with approximately 25.6 million individuals affected.

In response to the persistent burden, the global health community has set ambitious targets. The United Nations, through UNAIDS, established the 95–95–95 targets: diagnosing 95% of all HIV-positive individuals, providing antiretroviral therapy (ART) to 95% of those diagnosed, and achieving viral suppression in 95% of those treated by 2030 (UNAIDS, 2021). Despite these efforts, many challenges—such as stigma, discrimination, inadequate infrastructure, migration, and socio-economic inequality—continue to hinder global progress (Zhang et al., 2017; Vearey, 2018).

HIV remains highly securitized in global health discussions, especially in the context of population mobility. Migrants often face limited access to healthcare, increasing their vulnerability to infection. Additionally, public health messaging may not always reach mobile populations, and migration policies may inadvertently deprioritize essential health services (Zhang et al., 2017; Vearey, 2018). These complexities necessitate a more integrated response that balances public health priorities with migration and human rights considerations.

In terms of resource allocation, global HIV/AIDS spending in 2023 is estimated at $30 billion, with $12 billion directed toward prevention (The Global Fund, 2023) and $18 billion toward treatment and care (PEPFAR, 2023). In Sub-Saharan Africa, about 66% of these resources are allocated to care due to the region's high prevalence rates. In Kenya alone, HIV/AIDS-related expenditures reached $700 million in 2021, largely donor-funded (Galarraga et al., 2017). This highlights the reliance of low- and middle-income countries on international support and the importance of sustainable local responses.

Ghana, like many African nations, has faced the persistent challenge of HIV/AIDS. As of 2023, there are 354,927 people living with HIV in the country, including 17,774 new infections—of which 64% are female (GAC, 2023). Factors such as treatment non-adherence, stigma, poverty, gender inequality, and gaps in health infrastructure continue to affect control efforts.

The National HIV/AIDS Control Programme (NACP), established by the Government of Ghana, serves as the principal agency coordinating the national response. Its core **objectives** include reducing new infections, expanding access to HIV testing and counselling, ensuring uninterrupted ART provision, and promoting comprehensive care and support services (Adawiyah et al., 2021; Alhassan, 2023). The organization is housed under the Ghana Health Service and collaborates with ministries, NGOs, community groups, and international donors to implement and evaluate policies. Over the years, the NACP has achieved accomplishments such as decentralizing ART services to district hospitals, integrating HIV testing into antenatal care, and piloting mobile testing and youth outreach programs.

Despite these achievements, challenges persist. Ghana's progress towards the 95–95–95 targets is uneven, especially among marginalized groups. Stigma, limited awareness, and funding constraints impede access to services. Therefore, assessing the international HIV/AIDS response through the lens of Ghana's NACP provides critical insight into how global policies translate into national action. It also offers an opportunity to evaluate the effectiveness of local strategies and align them more closely with global health targets.

A comprehensive study focused on the NACP is thus timely and essential. As Jung et al. (2020) argue, ongoing evaluation of national programs ensures quality improvement, better resource allocation, and stronger community impact. By situating Ghana's response within the global HIV/AIDS effort, this study aims to generate evidence that supports policy reform, enhances service delivery, and contributes meaningfully to the worldwide fight against HIV/AIDS.

1.2 Problem Statement

Despite considerable national and global efforts to combat the HIV/AIDS epidemic, Ghana continues to record high rates of new infections, raising critical concerns about the effectiveness of ongoing interventions. The National HIV/AIDS Control Programme (NACP), established to coordinate Ghana's response through prevention, testing, treatment, and support services, remains a central player. However, emerging data suggest that the program faces persistent challenges in achieving sustained impact. For instance, the Ghana AIDS Commission (2024) estimates that approximately $300 million is needed annually to reach the national goal of eliminating HIV/AIDS by 2030 an indication of substantial funding gaps and unmet needs.

Key difficulties in implementation include limited access to healthcare services in underserved areas, weak health infrastructure, and human resource constraints that limit consistent service delivery. Structural barriers such as stigma and discrimination continue to discourage individuals from seeking testing and treatment, especially among vulnerable groups like sex workers, men who have sex with men, and injecting drug users (Sackeya et al., 2020; Goerling et al., 2024). Cultural norms, gender inequality, and poverty further exacerbate HIV transmission risks, particularly in regions with low education and limited access to condoms and preventive information (Seixas et al., 2018). These factors contribute to late diagnoses and treatment dropouts, undermining efforts to achieve the UNAIDS 95-95-95 targets.

Although the NACP has expanded ART coverage and testing services nationwide, critical gaps remain in outreach to high-risk populations, monitoring and evaluation systems, and integration of community-level feedback into policy adjustments. Additionally, a lack of disaggregated data and inconsistent follow-through on national strategies impede the ability to track progress and revise ineffective interventions.

Given these limitations, a comprehensive evaluation of the NACP is necessary to identify implementation gaps and system-level barriers that hinder its effectiveness. This study seeks to explore how well the NACP has responded to the evolving nature of the HIV/AIDS epidemic in Ghana, assess the factors driving the persistent surge in new infections, and offer empirically grounded recommendations for improving the program's responsiveness, efficiency, and long-term impact.

1.3 Research Objectives

The objectives of the study is to assess the international response to HIV/AIDS pandemic: the case of national HIV/AIDS control programme in Ghana.

1.3.2 Specific objectives

1. Identify the key factors contributing to the upsurge in HIV/AIDS cases globally and in Ghana.

2. To assess the current global situation and regional perspectives on the HIV/AIDS epidemic

3. To evaluate the role, interventions, and strategies implemented by the National HIV/AIDS Control Programme (NACP) in managing HIV/AIDS in Ghana.

4. To examine the successes, challenges, and gaps faced by the NACP in the prevention, treatment, and management of HIV/AIDS in Ghana.

1.4 Research Questions

1. What are the key factors contributing to the upsurge in HIV/AIDS cases globally and in Ghana?
2. What is the current global and regional situation regarding the HIV/AIDS epidemic?
3. What roles, interventions, and strategies has the National HIV/AIDS Control Programme (NACP) implemented to manage HIV/AIDS in Ghana?
4. What are the main successes, challenges, and gaps the NACP faces in the prevention, treatment, and management of HIV/AIDS in Ghana?

1.6 Scope of the Study

Despite efforts to combat the HIV/AIDS pandemic, Ghana continues to face high rates of new infections. This study evaluates the effectiveness of the National AIDS Control Programme (NACP) in addressing these challenges. It focuses on identifying factors hindering success, such as limited access to healthcare, stigma, and inadequate resource allocation, while assessing the strengths and weaknesses of current interventions. The findings aim to provide evidence-based recommendations to enhance the NACP's strategies, ensuring tailored solutions that address Ghana's unique socio-economic and healthcare context.

1.7 Conceptual Framework

This conceptual framework provides a holistic understanding of the HIV/AIDS epidemic by analyzing its interconnected dimensions, from identifying critical threats to assessing global and local responses. It begins by addressing the dual nature of the epidemic's threats: health and societal. The health dimension emphasizes the strain HIV/AIDS places on healthcare systems, particularly in low-resource settings. Kavanagh et al. (2021) observe that healthcare systems in many parts of the world struggle to cope with the demands of HIV treatment and prevention, resulting in delayed diagnoses, limited access to antiretroviral therapies (ARTs), and increased mortality rates. On the societal side, stigma and discrimination remain pervasive barriers to progress. Turan et al. (2019) explain that stigma discourages individuals from seeking timely testing and treatment, which exacerbates the spread of the virus. Furthermore, stigma fosters misinformation and fear, weakening public health efforts and creating social exclusion for affected populations.

The discourse surrounding HIV/AIDS plays a critical role in shaping public perceptions and policy decisions. Political narratives often frame the epidemic as a security threat, emphasizing its potential impact on economic stability and governance. Nattrass and Gonsalves (2022) argue that securitizing HIV/AIDS has been effective in mobilizing resources and political commitment but warn that this approach can prioritize containment over comprehensive care. Media representations further influence societal attitudes. While narratives portraying HIV/AIDS as a crisis can attract funding and public attention, they can also reinforce fear and stereotypes. Dong et al. (2021) highlight the importance of media in promoting positive narratives that foster community engagement and reduce stigma, emphasizing stories of resilience and progress.

Policy responses are essential for mitigating the epidemic's impact. Resource mobilization remains a cornerstone of these responses, ensuring that prevention, treatment, and care initiatives are adequately funded. Gupta et al. (2020) demonstrate how sustained investments in HIV programs have led to significant reductions in new infections and improved health outcomes. Additionally, legislative frameworks are critical in ensuring that the rights of individuals living with HIV/AIDS are protected while supporting public health objectives. Smit et al. (2022) stress that laws and policies must balance public health priorities with human rights protections to avoid marginalizing vulnerable populations further. Poorly designed laws, such as those criminalizing HIV transmission or targeting key populations, undermine trust in health systems and hinder prevention efforts.

The global nature of HIV/AIDS necessitates international cooperation to address cross-border transmission and its broader socio-economic impacts. HIV/AIDS transcends national borders, requiring collaborative efforts between countries to ensure effective responses. Global initiatives such as UNAIDS and the Global Fund play vital roles in coordinating efforts and mobilizing resources to address the epidemic comprehensively (UNAIDS, 2023). Moreover, regional partnerships strengthen collective responses, particularly in areas where cross-border dynamics exacerbate the epidemic's spread. Economic considerations are also integral, as the epidemic has far-reaching implications for labor productivity and economic stability. Collaborative strategies that align health interventions with socio-economic development priorities are essential for sustainable progress.

Ultimately, combating HIV/AIDS requires a multi-faceted and coordinated approach. Effective prevention strategies, equitable treatment access, and the reduction of new infections depend on addressing the epidemic's health, societal, and global dimensions. By framing HIV/AIDS as a securitized issue and a transnational health challenge, this framework underscores the importance of holistic and collaborative responses to tackle the epidemic effectively.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the existing literature on the international response to the HIV/AIDS pandemic, focusing on the case of Ghana's National HIV/AIDS Control Programme (NACP). The review covers various aspects of HIV/AIDS management and response, with a particular emphasis on how international and national efforts intersect. The subtopics discussed in this chapter include:

- Securitization of HIV/AIDS Management
- Transnational Security Threat of HIV/AIDS
- Global Health Initiatives and Their Impact
- The Role of Migration in HIV/AIDS Spread
- Criticism and Challenges of the Securitization Approach

2.2 Securitization of HIV/AIDS management

Securitization theory, originally developed within the field of international relations, explores how issues are framed as security threats, thus justifying extraordinary measures for their management. Securitization theory posits that an issue becomes a security concern when it is articulated as an existential threat, requiring urgent and exceptional responses. This process involves three steps: the identification of a threat, the acceptance of that framing by relevant audiences and the implementation of extraordinary measures (Buzan et al., 1998). In the context of HIV, framing the epidemic as a security threat can mobilize resources and political will but may also lead to stigmatization and human rights violations. The securitization of HIV has been particularly pronounced in regions heavily affected by the epidemic.

The emergence of global health initiatives, such as the Global Fund to Fight AIDS and Tuberculosis, which have leveraged the security framing to garner support from states. These initiatives have improved access to treatment, they also risk prioritizing security above human rights, potentially undermining the dignity of affected populations (Fidler, 2010). Securitization can lead to increased funding and attention, it often results in punitive measures targeting specific populations, particularly key populations vulnerable to HIV. A balanced approach that recognizes the need for security while prioritizing human rights and social justice (Lindstaedt, 2021).

Securitization can mobilize resources but it is not without criticism. Critics argue that framing HIV as a security threat can lead to militarized responses and human rights abuses. The securitization approach for fostering a climate of fear, which can hinder open dialogue about sexual health and rights (Cohen, 2019). There is the need for inclusive and rights-based approaches that address the root causes of the epidemic rather than merely framing it as a threat.

The framing of HIV/AIDS as a security threat in Southern Africa has influenced national and international responses, leading to increased funding and attention but also raising concerns about civil liberties and human rights (Elbe, 2006). While securitization can mobilize resources, it can also perpetuate stigma against marginalized groups. In Southern Africa, securitization narrative has shaped responses to the epidemic. The framing of HIV as a national security threat has led to more aggressive public health policies, including mandatory testing and surveillance (Roudnická, 2019). However, these measures have often exacerbated social stigma and discrimination against people living with HIV.

In Ghana, the intersection of migration and HIV is perilous, as many migrants may not have adequate access to testing and treatment services, leading to higher transmission rates within communities. Ghana's national response to HIV has evolved to include a focus on integrating

HIV services into broader health initiatives. However, the securitization approach can lead to policies that prioritize surveillance and control over comprehensive healthcare access. The reliance on international funding for HIV programs can influence the nature of interventions implemented in Ghana (Kaunert et al, 2022). While these funds have helped expand access to antiretroviral therapy (ART), they may also promote short-term solutions that do not address the underlying issues driving the epidemic. The application of securitization theory to HIV management reveals complex dynamics between security, policy responses, and human rights. Framing of HIV as a security threat can mobilize resources and attention, it also risks stigmatization and the implementation of punitive measures.

2.3 Transnational security threat of HIV/AIDS

The HIV/AIDS epidemic has been increasingly framed as a transnational threat, emphasizing the interconnectedness of health issues across borders. This perspective highlights how HIV not only impacts individual health but also poses challenges to global security, economic stability, and humanitarian efforts. Transnational threats refer to issues that transcend national boundaries and require cooperative international responses. In the case of HIV/AIDS, the epidemic is not confined to specific regions, it affects populations worldwide, necessitating a coordinated approach across countries. The World Health Organization (WHO) and other global health entities have recognized HIV as a transnational health threat, leading to collaborative initiatives and policies aimed at controlling its spread (WHO, 2014). HIV as a transnational threat reflects its implications for public health security, economic development, and social stability. HIV as a transnational issue has led to increased funding and resources from global health organizations (WHO, 2023).

The regional collaborations in Africa to combat HIV as a transnational threat such as the African Union, have played an important role in facilitating cooperation among member states (Piot & Seck, 2001). The collaborations are essential for addressing the cross-border nature of

the epidemic, especially in areas with high migration rates and mobile populations. The economic complications of HIV/AIDS as a transnational threat cannot be over stated. The epidemic significantly impacts economic productivity, especially in developing countries. Addressing HIV through a transnational lens can contribute to economic stability and development, as improved health outcomes lead to a more productive workforce (Stover et al., 2014).

The strategy for "one-size-fits-all" approach to global health governance may not work in most situation (Fidler, 2010). These strategies may overlook local contexts and needs specifically the sociocultural dynamics of affected regions.

The transnational nature of HIV/AIDS in West Africa necessitates a coordinated response across borders. Collaborative efforts by countries in the Economic Community of West African States (ECOWAS) have been initiated, but challenges remain in harmonizing policies and ensuring equitable access to healthcare services across the region (Mavrotas et al., 2019). Individuals with HIV often face discrimination in healthcare settings, which deters them from accessing necessary services (Ogunbajo et al., 2015). This stigma exacerbates the epidemic by perpetuating misinformation and fear within communities.

In Ghana exhibited higher rates of HIV prevalence compared to non-migrants, largely due to limited access to prevention and treatment services (Kassah et al., 2018). This finding underscores the need for tailored interventions for migrant populations to mitigate their risk.

2.4 Global Health Initiatives and Their Impact

Global health initiatives have played a critical role in addressing the HIV/AIDS pandemic, particularly in low- and middle-income countries like Ghana. These initiatives have not only provided financial and technical resources but also shaped global discourse on the epidemic, influencing national and international policies and practices. Key global health organizations, such as the World Health Organization (WHO), UNAIDS, and the Global Fund to Fight AIDS,

Tuberculosis, and Malaria, have spearheaded efforts to combat HIV/AIDS through funding, advocacy, and the coordination of global strategies.

One of the most significant impacts of global health initiatives has been the mobilization of substantial resources for HIV prevention, treatment, and care. For instance, the Global Fund has been instrumental in providing funding to various countries, including Ghana, to support the scaling up of antiretroviral therapy (ART), which has significantly improved health outcomes for people living with HIV (Global Fund, 2023). These resources have enabled the establishment of HIV testing and counseling services and the procurement of essential medications. In Ghana, the partnership between the government and global health organizations has contributed to a reduction in HIV-related morbidity and mortality, although challenges remain in terms of equitable distribution and access, particularly in rural areas (Kassah et al., 2018).

Moreover, global health initiatives have influenced national HIV/AIDS policies. By providing evidence-based recommendations and technical assistance, organizations like UNAIDS have supported the Ghanaian government in developing and refining its National HIV/AIDS Strategic Plan. These plans have focused on various interventions, including prevention programs targeting high-risk populations, such as sex workers and men who have sex with men (MSM), as well as broader public health education campaigns aimed at reducing stigma and discrimination (Piot & Seck, 2001). These efforts have contributed to creating a more inclusive and rights-based approach to HIV/AIDS management.

However, the impact of global health initiatives has been criticized in several ways. While international support has been essential in addressing immediate needs, some argue that it has led to a reliance on external funding, which may not be sustainable in the long term (Fidler, 2010). This dependence on donor funding raises concerns about the continuity of HIV/AIDS

programs, as shifts in donor priorities or financial constraints can disrupt ongoing efforts. Additionally, global health initiatives sometimes impose standardized solutions that may not be culturally appropriate or contextually relevant to local communities (Cohen, 2019). The "one-size-fits-all" approach often overlooks the specific sociocultural dynamics of the regions most affected by the epidemic, leading to potential gaps in the effectiveness of interventions (Fidler, 2010).

Moreover, while these initiatives have successfully raised awareness and provided critical resources, they have not always addressed the structural factors driving the HIV/AIDS epidemic, such as poverty, gender inequality, and limited access to education and healthcare. In Ghana, as in many other African countries, the persistence of these underlying socio-economic challenges complicates the effectiveness of global health interventions. For example, although ART availability has increased, issues such as stigma, limited healthcare infrastructure, and poverty continue to hinder widespread access and adherence to treatment (Ogunbajo et al., 2015).

Global health initiatives have made a significant impact on the fight against HIV/AIDS in Ghana, especially in terms of funding, resource mobilization, and policy development. However, for these initiatives to be effective in the long term, they must adopt context-specific strategies that take into account local challenges and work toward reducing the structural barriers that hinder comprehensive HIV/AIDS management.

2.5 The Role of Migration in HIV/AIDS Spread

Migration is a significant factor in the spread of HIV/AIDS, particularly in regions with high population movement across borders. In countries like Ghana, migration is driven by various factors, including economic opportunities, conflict, political instability, and environmental changes (Kassah et al., 2018). Migrants, especially those who are part of transient or mobile

populations, face unique health challenges that increase their vulnerability to HIV infection. These challenges need to be addressed in the context of national HIV response strategies.

One of the key factors contributing to the increased HIV risk among migrants is engagement in high-risk behaviors, including unprotected sexual activity with multiple partners. Migrants working in industries such as mining, construction, or agriculture are often in isolated settings where sexual health services are not available. These work environments, which may lack health education and preventive services, put migrants at a greater risk of HIV (Ogunbajo et al., 2015). The absence of readily accessible healthcare and information further exacerbates the risk of HIV transmission in these communities (Stover et al., 2014).

In addition to the behavioral risks, migrants also face significant social and economic marginalization. For example, migrants may experience discrimination or lack the resources to access essential health services, including HIV testing and treatment. This social exclusion, coupled with limited knowledge of available services, discourages many migrants from seeking the care they need (Kaunert et al., 2022). Furthermore, undocumented migrants often face legal barriers that prevent them from accessing public health services, including HIV-related care. These barriers make it difficult for them to receive timely treatment, increasing the likelihood of further transmission within both migrant and host communities (Ogunbajo et al., 2015).

Studies in Ghana have shown that migrant populations tend to have higher HIV prevalence rates than non-migrants. This is largely due to their limited access to HIV prevention and treatment services, coupled with social marginalization and economic instability (Kassah et al., 2018). Migrants, particularly those living in border regions or rural areas, are often not included in mainstream health interventions. Their increased mobility makes it challenging for health systems to track HIV cases and ensure continuity of care, thus contributing to the ongoing spread of the disease.

The global response to migration and HIV/AIDS has recognized the need for migrant-sensitive policies and interventions. Organizations such as the World Health Organization (WHO) and UNAIDS have advocated for greater inclusion of migrant populations in HIV prevention and care programs. These organizations highlight the importance of addressing the specific needs of migrant communities, including access to HIV testing, treatment, and education, and call for policies that reduce discrimination and stigma (WHO, 2014).

At the regional level, collaborations among countries in West Africa, such as those facilitated by the Economic Community of West African States (ECOWAS), have sought to address the health needs of mobile populations. These initiatives aim to create cross-border health policies and programs that ensure equitable access to healthcare services, including HIV prevention and care. However, the implementation of these initiatives has been inconsistent, and challenges remain in harmonizing policies and ensuring that migrants receive the care they need across borders (Mavrotas et al., 2019).

In Ghana, although the national health system has made strides in integrating HIV services, migrants still face barriers in accessing care. These include language differences, lack of health information, and cultural misunderstandings that often deter them from seeking services. Moreover, migrants in rural or border areas are especially vulnerable because of the scarcity of health infrastructure and resources (Piot & Seck, 2001).

A comprehensive approach to addressing the role of migration in the HIV/AIDS epidemic in Ghana requires more than just healthcare access. Policies need to focus on creating a supportive environment for migrants by reducing stigma, providing education on sexual health, and ensuring that healthcare systems are inclusive of migrant populations. Cross-border collaborations and the establishment of regional health policies will be essential to mitigate the effects of migration on HIV transmission. Additionally, integrating HIV services into broader

migration health policies will help provide more comprehensive care for migrants and reduce the burden on local health systems.

By addressing these issues, it is possible to reduce the spread of HIV among migrant populations and improve the overall effectiveness of HIV/AIDS responses in Ghana and West Africa. This approach must focus on making healthcare more accessible to migrants, while also tackling the root causes of their increased vulnerability to HIV, such as discrimination, economic insecurity, and lack of information. Only by addressing these complex challenges will it be possible to ensure that HIV/AIDS prevention and treatment services are effective in all sectors of society, including migrant populations.

2.6 Criticism and Challenges of the Securitization Approach

The securitization of HIV/AIDS, while effective in drawing attention and resources to the epidemic, has faced significant criticism from scholars and public health experts. The main concern is that the approach tends to prioritize security over human rights and public health needs, often leading to negative consequences for vulnerable populations.

A major criticism of the securitization of HIV/AIDS is the potential for exacerbating stigma and discrimination. Framing HIV/AIDS as a national security threat tends to focus on surveillance, control, and the regulation of high-risk groups such as sex workers, men who have sex with men, and people who inject drugs. As a result, these groups often find themselves criminalized or marginalized, which may discourage individuals from seeking HIV testing or treatment due to fear of legal repercussions and social ostracization (Cohen, 2019). This approach inadvertently perpetuates harmful stereotypes and creates an environment where people living with HIV are treated as societal outcasts, hindering efforts to control the epidemic.

Another concern is the militarization of public health responses that accompany the securitization framework. The emphasis on security often leads to policies that prioritize

control mechanisms, such as mandatory HIV testing, quarantine measures, and surveillance. These measures can violate individual rights and undermine the principles of public health, such as voluntary testing and informed consent. Critics argue that such policies fail to address the root causes of the epidemic, such as poverty, gender inequality, and lack of access to healthcare. By focusing on the virus as a threat to security, rather than addressing these broader socio-economic issues, the securitization approach risks implementing short-term, surface-level solutions that fail to create lasting change (Lindstaedt, 2021).

Furthermore, the securitization of HIV/AIDS has raised concerns about the marginalization of social justice considerations. While the security framing has successfully mobilized international resources for HIV/AIDS programs, it often overlooks the social determinants that increase vulnerability to the virus. These determinants, including inequality, poor education, and lack of access to healthcare, play a significant role in the spread of HIV, particularly in low-income and marginalized communities. A security-driven approach tends to focus more on the technical aspects of controlling the epidemic, such as drug distribution and surveillance, without adequately addressing the broader social and economic inequities that fuel the crisis (Fidler, 2010). Without integrating social justice into HIV/AIDS responses, efforts to combat the epidemic may be less effective and more likely to fail in the long run.

The reliance on international funding for HIV/AIDS programs is another challenge associated with the securitization approach. While such funding has been crucial in expanding access to HIV treatment and prevention, it has also created a dependency on external donors, which may not always align with the needs and priorities of local communities. In Ghana, for example, international aid has played a significant role in funding HIV interventions, but the dependence on external resources has led to challenges in developing sustainable, locally-driven solutions. Additionally, the focus on short-term results to appease donors may divert attention from

addressing the underlying structural issues that perpetuate the epidemic, such as healthcare infrastructure, education, and community-based prevention programs (Kaunert et al., 2022).

The securitization of HIV/AIDS has also been criticized for its negative impact on public dialogue around sexual health. The climate of fear and secrecy surrounding the issue of HIV, exacerbated by its framing as a security threat, may discourage open discussions about prevention, sexual health education, and the importance of testing. This can result in a lack of awareness about HIV transmission and prevention, as well as a reluctance to seek treatment. Fear of being labeled as a "threat" to national security or public health can deter individuals from engaging with HIV services, further perpetuating the cycle of stigma and misinformation (Elbe, 2006).

The overemphasis on securitization can also overshadow other important public health priorities. By framing HIV/AIDS as an emergency or crisis requiring urgent national security measures, governments and international bodies may divert attention from other pressing health challenges. In countries like Ghana, where multiple health issues, including malaria, maternal health, and tuberculosis, require attention, the focus on HIV as a security threat may limit resources and political will for a more comprehensive approach to health (Roudnická, 2019). As a result, addressing HIV/AIDS as a security issue may inadvertently detract from the holistic healthcare needs of affected populations.

The criticisms of securitization highlight the need for a more balanced and human-centered approach to HIV/AIDS management. While securitization can mobilize necessary resources and political will, it must be implemented in a way that respects the rights of individuals and addresses the underlying social and economic factors that fuel the epidemic. Public health strategies should integrate a human rights-based approach that prioritizes equity, education,

and access to care, while ensuring that the voices and needs of vulnerable populations are central to policy-making.

2.7 THEORETICAL REVIEW

2.7.1 Health Belief Model (HBM)

The Health Belief Model (HBM) is one of the most widely used behavioral theories in public health and is particularly relevant to HIV/AIDS prevention and treatment. The HBM posits that individuals' engagement in health-related behaviors depends on their perceptions of susceptibility to the condition, its severity, the benefits of taking preventive action, and the barriers to doing so (Rosenstock, 1974; Champion & Skinner, 2008).

Applied to HIV/AIDS, the HBM explains how individuals' decisions to engage in behaviors like HIV testing, antiretroviral adherence, or condom use are shaped by their belief systems. For instance, a person is more likely to get tested if they believe they are at risk of contracting HIV (perceived susceptibility), understand the severe consequences of the disease (perceived severity), believe that testing and treatment are beneficial, and face few social or logistical barriers (Glanz et al., 2015).

Studies have shown that interventions based on HBM principles such as community outreach programs that reduce perceived stigma and emphasize the benefits of early treatment—have been effective in increasing HIV testing uptake and ART adherence in low- and middle-income countries, including Ghana (Effah et al., 2021; Donkor et al., 2022). The HBM thus provides a framework for evaluating how NACP's communication and intervention strategies address these psychological determinants of health behavior.

2.7. 2. Systems Theory

Systems Theory offers a macro-level framework for evaluating complex public health interventions like the NACP. Originally developed by von Bertalanffy (1968), this theory views organizations and programs as interconnected systems whose success depends on the

coordination and feedback among various components such as human resources, funding, community engagement, infrastructure, and policy frameworks.

In the context of HIV/AIDS response, Systems Theory helps examine how the NACP functions within the broader health system, including its coordination with NGOs, international donors, and other government agencies. It emphasizes the importance of feedback mechanisms, resource flows, and adaptive capacity in responding to the evolving dynamics of the HIV/AIDS epidemic (Leischow et al., 2008).

This approach is especially useful in assessing how well NACP's strategies align with external inputs (such as funding and international guidelines), and how internal inefficiencies such as staff shortages or fragmented service delivery affect outcomes (Agyepong et al., 2022). By viewing NACP as an open system, this theory enables a comprehensive evaluation of both internal programmatic performance and its interaction with the wider sociopolitical and healthcare environment in Ghana.

CHAPTER THREE

METHODOLOGY

3.1 Study design

The study deployed a mixed-method approach. In the first arm, a cross-sectional design will be adopted to collect quantitative data among eligible respondents in the country, with the guide of a structured questionnaire. A survey will be collected among PLHIV and healthcare workers in Ghana to understand the strategies that are being put in place to reduce the incidence of HIV/AIDS. The purpose of choosing this study design is to ensure that, data for the study is collected at one point in time and from study participants within a specific point in time (Levin, 2006). However, descriptive cross-sectional study design is useful for simply describing the desired characteristics of the representative sample that is being studied and allows findings to be generalized to a larger target population and useful for the generation of a hypothesis. This design is relatively less time-consuming and less expensive. It is an appropriate design because it enabled the collection of quantitative data to describe as well as establish associations between the independent variables and factors towards the reduction of HIV incidence in line with the study objectives.

In the second arm, phenomenological research design was applied to collect data among key respondents (in-depth-interview (IDI) and Focus Group Discussion (FGD)) among Policy stakeholders, HIV project coordinators, international organization representatives, Healthcare Workers (HCWs), and key stakeholders. This design is appropriate because can look at change processes over time, help to understand people's meanings, and adjust to new issues and ideas as they emerge. It also contributes to the development of new theories.

3.2 Population of the Study

The study population included all PLHIV in the three health facilities selected in the 3 regions; Northern Regional Hospital, Asante Regional Hospital and Ho Teaching Hospital. Also, HCWs

in the three facilities selected shall be included while the HIV project coordinators will be selected from the Regional Health Directorates (RHD), and the key stakeholders from the NACP would also be the study population.

3.3 Inclusion and exclusion criteria

3.3.1 Inclusion criteria

All PLHIV that come for ART refill or any other HIV services in the three selected health facilities will be included in the study. Also, HCWs in the three facilities, the HIV project coordinators from the RHDs, and the key stakeholders from the NACP would be included in the study.

3.3.1 Exclusion criteria

All PLHIV but severely sick will be excluded from the study. HCWs, Stakeholders, and HIV project coordinators who did not give consent to participate in the study will be excluded as well.

3.4 Sample Size Determination

3.4.1 Quantitative Sample Size Determination

The sample size for the study was calculated using Cochran's formula for the quantitative aspect of the study. It considered a level of precision, confidence interval (CI), and the P = Prevalence, which was 50% =0.5. A 95% confidence level (z) and a 5% margin of error (e) were used for the calculation. A non-response rate of 5% was added to the calculated sample size to obtain the sample size for the study.

Using the formula: n = (z^2*p(1-q))/e2 (Cochrane, 1977)

Where n= sample size, z= desired level of confidence, p = prevalence, and e = margin of error.

Therefore; n = ((〖1.96〗^2) *0.5(1-0.5))/〖0.05〗^2

= 384.16

Adding 5% non-response rate, n = 0.05*384.16 = 12.2+225.8 = 388

Therefore, the sample size for the quantitative aspect of the study ≈ 388.

3.4.2 Qualitative Sample Size Determination

In each of the three facilities selected in the regions, three (3) FDGs was conducted among HCWs that provide HIV services to the PLHIV. IDI will also be conducted by Policy stakeholders, HIV project coordinators, international organization representatives, and key stakeholders. However, the sample size for the qualitative aspect of the study specifically the IDI was determined by saturation.

3.5 Sampling technique

3.5.1 Quantitative Sampling technique

Multi-stage sampling was used for the study. At the primary sampling stage, the country will be clustered into zones (the northern, central, and southern) that have sentinel sites. At the secondary sampling stage of the multistage, three regions will be selected from the zones (Northern Region from the northern cluster, Asante Region from the central cluster, and Volta Region in Southern). At the ultimate sampling stage, three health facilities will be selected from the regions (Northern Regional Hospital, Asante Regional Hospital, and Ho Teaching Hospital). In each selected health facility, a systematic random sampling approach will used to select the respondents from the ultimate strata. With this method, a list will be created for all the respondents (PLHIV) by assigning them numbers serially. Pieces of paper of equal sizes will be numbered from 1 to Kth, placed in a box, and thoroughly shaken to mix.

A piece of paper will be blindly selected from the box to determine the starting point on the list for selecting respondents for the study. The randomly selected number (Nth) between 1 and Kth will be the starting point from which every Kth PLHIV on the list will be selected until the required sample size for that facility is reached. Any PLHIV selected will be interviewed if

they meet the inclusion criteria and give consent. If a person selected declined to participate, the next person will be selected to meet the sample size for that facility.

3.5.2 Qualitative Sampling technique

The HCWs, Policy stakeholders, HIV project coordinators, international organization representatives, and key stakeholders was purposively and conveniently selected for the FGD and the IDI. The HCWs for the FGD was selected in the three facilities selected in the region while the HIV project coordinators will be selected from the Regional Health Directorates (RHD), and lastly, the key stakeholders from the NACP.

3.7 Data collection and analysis

For quantitative data, a pre-tested questionnaire was used to guide data collection. The design of the questionnaire will be informed by the literature. The questionnaire will be mounted onto KoboCollect and tablets will be used to collect the data. In each facility where PLHIV be recruited, participants who consent to participate will be interviewed in the ART centre where no one is to help ensure privacy and confidentiality. This is also to minimise all noise and negative influence on other activities on the process and quality of the data collection. In each region, an equal number of participants will be recruited from the three (3) health facilities to make up the total expected sample. The questionnaire is expected to take an average of 30 minutes to administer.

After the data collection, descriptive and inferential analyses was done using STATA version 17 at the 0.05 level of significance for the quantitative aspect. Also, tables and charts will be used to present results.

3.7.2 Qualitative data collection Procedures and analysis

For the qualitative component of the study, FGD was conducted among HCWs for each region. HCWs will be contacted to arrange a convenient venue and time for the data to be collected. Also, IDI was conducted among Policy stakeholders, HIV project coordinators, international organization representatives, and key stakeholders. However, the interview schedule will be shared with the participants ahead of the interview to enable them to make time for the study while each in-depth interview will take an average of 40 minutes.

Thematic codes was generated.

3.8 Quality control

To ensure the data collected will be of good quality, pretesting will be done to ensure the validity and reliability of the data collection instruments. Also, research assistants will be trained to ensure their understanding of the instrument and the data to collect.

3.9 Ethical consideration

3.9.1 Ethical clearance

Ethical approval will be sought from the University's Research Ethics Committee, before the start of the study.

3.9.2 Institutional permission/Administrative approval

Institutional permission will be sought from all health facilities, the RHDs, and NACP where the data will be collected before the data collection. Clearance letter together with introductory letters for permission to be granted for data collection to begin.

3.9.3 Anonymity and confidentiality

The principal investigator (PI) will ensure that no names, phone numbers, addresses, or any identifiable information that can be traced to any participant are captured on the questionnaires. Unique codes will be assigned to each participant and will be used for the analysis. Also, the

participants will be assured that any information provided will be strictly confidential and that only the PI and the Supervisor will have access to the information provided.

3.9.4 Voluntary participation and withdrawal from the study

All the study procedures will be clearly explained to the participants in the language they can easily understand in the informed consent. The participants will be made known that participation in the study is voluntary and that they are at liberty to withdraw from the study at any time without any implications.

3.9.5 Potential Risk of the study

There will be no stipulated risk for participating in the study. However, study participants may feel uncomfortable in responding to some of the questions due to the sensitive nature of the topic under investigation. In view of this, the questions will be worded in a manner to reduce such negative effects. Also, trained research assistants will be used for the data collection so as to instigate privacy and confidentiality in the study participants to openly volunteer to participate in the study.

Alcohol-based hand sanitisers and nose masks will be provided to data collectors for use. The pens that will be used by the respondents to sign the consent forms will be disinfected by robbing an alcohol-based hand sanitiser after each use. In the event that the participants must thumbprint the forms, they will be provided with hand sanitizers to sanitise their hands before thumb-printing.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

In-depth interviews were conducted with three HIV project coordinators and fifteen healthcare workers involved in HIV patient care. The objective of these interviews was to assess the national HIV/AIDS control program in Ghana and to validate the findings from the quantitative data. The themes and sub-themes identified from the interviews have been summarized in tables, accompanied by supporting codes derived from the participants' responses.

4.2 Regional perspectives on the HIV/AIDS disease HIV Project Coordinators Perspectives

Table 1 presents the themes on HIV/AIDS response derived from interviews conducted with regional HIV coordinators. Through their interviews, three main themes were identified: regional epidemiological trends, barriers to HIV control, and proposed solutions. These themes provide a comprehensive understanding of the current HIV epidemic within specific regions, the challenges faced in controlling it, and the suggested approaches to improve response strategies.

The HIV coordinators observed rising HIV prevalence in certain key populations, including adolescents and men who have sex with men (MSM). The increasing rates of HIV among these populations have been well-documented in the literature (Smith et al., 2019; Brown & Green, 2020). Adolescents, in particular, face unique vulnerabilities due to a combination of factors such as limited access to sexual health education, higher rates of risky sexual behaviors, and barriers to healthcare access (Nguyen et al., 2018). The coordinators reported that, in many cases, prevention and treatment efforts have not sufficiently addressed the needs of these high-risk groups, exacerbating their vulnerability to HIV. Similarly, MSM remain disproportionately affected by HIV, due to societal stigma, discrimination, and legal barriers in many regions (WHO, 2021). Studies indicate that MSM are at a higher risk of HIV due to

factors such as unprotected sex, multiple sexual partners, and inconsistent use of prevention methods like condoms (Murray et al., 2019).

These findings resonate with the observations of the coordinators, who emphasized the need for tailored interventions targeting MSM to address this growing issue. The coordinators also noted significant regional disparities in the progress of HIV control. While some regions have met their HIV targets, others have continued to struggle. This uneven progress is often influenced by varying levels of healthcare infrastructure, regional economic conditions, and local political will to prioritize HIV interventions (Jones et al., 2020). The uneven distribution of resources, along with challenges in implementing universal health coverage, remains a critical challenge in the global fight against HIV/AIDS. Some regions that have been successful in meeting their targets have benefited from better funding, effective policy implementation, and stronger community mobilization efforts.

A significant barrier identified by the HIV coordinators is stigma and discrimination. Stigma surrounding HIV is prevalent in many societies and serves as a barrier to accessing healthcare and HIV prevention services. The coordinators highlighted that individuals often fear judgment or rejection from healthcare providers, which discourages them from seeking testing, treatment, or counseling (Parker & Aggleton, 2017). This fear of stigma has been widely cited in the literature as a major determinant of whether individuals access HIV services (Hargreaves et al., 2018). Research has shown that individuals who fear being stigmatized for their HIV status are less likely to seek care and treatment, which ultimately hinders efforts to control the epidemic. Another critical barrier discussed by the coordinators was the challenge of securing adequate funding for HIV programs. The reduction in donor funding, which has been a global concern in recent years, has led to financial constraints that affect the sustainability of HIV programs (Global Fund, 2022). Several studies have reported that the shifting focus of global health

funding, along with economic downturns, has resulted in reduced support for HIV/AIDS prevention, treatment, and care initiatives (UNAIDS, 2020).

The HIV coordinators expressed concerns about the long-term viability of HIV interventions in the absence of sustained financial commitments from donor organizations and governments. The coordinators also cited insufficient political will and inadequate local healthcare infrastructure as additional barriers to effective HIV control. In many regions, political leaders have failed to prioritize HIV/AIDS as a critical public health issue, leading to poor policy implementation and inadequate support for necessary programs (Ghosh et al., 2021). Furthermore, the lack of trained healthcare professionals, limited access to HIV testing facilities, and inadequate supply chains for antiretroviral drugs (ARVs) were identified as persistent obstacles in delivering timely care to those in need.

To overcome these barriers, the coordinators recommended several key solutions. A prominent solution proposed by the coordinators was enhanced community engagement. Leveraging peer educators to increase awareness and improve outreach efforts was seen as an effective strategy to combat stigma and promote better understanding of HIV prevention and treatment options. Peer-led interventions have been shown to be particularly successful in engaging hard-to-reach populations, including MSM and adolescents, by providing relatable and trusted sources of information (O'Reilly & Padian, 2018).

Peer educators, who are often from the same communities as the individuals they serve, can help reduce stigma and encourage individuals to seek HIV services without fear of discrimination. The importance of policy reforms was another significant suggestion. The coordinators emphasized the need for decriminalizing key populations, such as MSM, to remove legal and societal barriers to accessing HIV services. Decriminalization has been

shown to increase the uptake of HIV services by reducing the fear of persecution and providing a safer environment for individuals at higher risk of HIV (UNAIDS, 2020).

Research indicates that countries that have decriminalized MSM activities or have adopted more inclusive laws have seen improvements in HIV prevention, as these populations are more likely to engage in healthcare services when they feel protected by the law (Nair & Das, 2019). In addition to policy changes, the coordinators also recommended an increase in domestic funding for HIV programs, alongside continued support from international donors. Strengthening local funding mechanisms would help reduce dependence on external sources, thus ensuring the long-term sustainability of HIV interventions (Babu & Ahuja, 2020). This includes investing in local healthcare infrastructure, increasing access to HIV testing, and ensuring the uninterrupted supply of ARVs. Coordinators also emphasized the need for capacity building for healthcare providers to address the unique needs of key populations and ensure that care is non-judgmental and inclusive.

Table 1: Themes emerging from HIV project Coordinators

Main Theme	Sub-Theme	Key Issues Raised
Regional Epidemiological Trends	Rising prevalence in key populations	Increasing cases among young adults.
	Uneven progress across regions	Some regions meeting 95-95-95 targets; others lagging behind.
Barriers to HIV Control	Stigma and discrimination	Fear of accessing services due to judgement from providers.

Main Theme	Sub-Theme	Key Issues Raised
Proposed Solutions	Funding challenges	Reduced donor funding affecting program sustainability.
	Enhanced community engagement	Leveraging peer educators to improve outreach and awareness.
	Policy reforms	Decriminalizing key populations to improve service uptake.

4.2.2 Regional Trends

Rising prevalence in key populations and uneven progress across regions

Under regional epidemiological trends, participants highlighted a rising prevalence of HIV, particularly among young adults. One participant observed, "We're seeing an alarming rise in HIV cases among adolescents, especially in urban areas where risky behaviors are more common" (Regional Coordinator, 42 years). Another participant noted, "Some regions are on track to meet the 95-95-95 targets, but others are falling behind due to resource and personnel gaps" (Regional Coordinator, 37 years). This uneven progress is consistent with findings from other studies, which emphasize the disparities in HIV control efforts across different regions, with some areas lagging due to limited resources and infrastructural challenges (Smith et al., 2020; Bwalya & Mwansa, 2021).

For barriers to HIV control, stigma and discrimination were identified as major challenges. Participants underscored that fear of judgment prevents individuals from seeking care. One regional coordinator explained, "People are afraid to get tested because they don't want anyone to know their status; even health workers sometimes reinforce this fear" (Regional Coordinator,

34 years). This observation aligns with previous research, which suggests that stigma related to HIV remains a significant barrier to testing and treatment, particularly in sub-Saharan Africa (Awuah et al., 2021; Amoako et al., 2022). Additionally, funding challenges were highlighted as a critical concern. As one participant stated, "The reduction in donor funding has really affected our ability to procure test kits and maintain consistent ART supply" (Regional Coordinator, 42 years). This concern mirrors findings from other studies that show how fluctuations in donor funding impact the sustainability of HIV control programs (Moyo et al., 2020; Tetteh & Doku, 2021).

In terms of proposed solutions, enhanced community engagement was suggested as a way to improve awareness and service uptake. One regional coordinator shared, "We need to involve trusted community members like chiefs and religious leaders to break down the stigma and encourage people to access services" (Regional Coordinator, 37 years). This is in line with studies that recommend the involvement of community leaders in health education and advocacy as a means to overcome stigma and increase health service utilization (Njoroge et al., 2020; Amu et al., 2021). Additionally, leveraging peer educators was recommended. As one participant explained, "Peer educators are effective because they can relate directly to the challenges faced by their communities" (Regional Coordinator, 34 years). Research supports the role of peer education in improving HIV-related knowledge and promoting service uptake, especially in hard-to-reach populations (Nguyen et al., 2019; Coker et al., 2022). Policy reforms, particularly decriminalizing key populations, were also discussed. One participant emphasized, "Unless we decriminalize key populations, they will remain hidden and continue to avoid healthcare services" (Regional Coordinator, 42 years). This is consistent with global recommendations advocating for the decriminalization of key populations to improve access to healthcare and reduce stigma (UNAIDS, 2020; Kelly et al., 2021).

4.3 Themes Exhibited by Health Workers

Table 2 presents the themes identified from the interviews with health workers involved in the management of HIV/AIDS care. Five primary themes emerged: perceptions of the effectiveness of the National AIDS Control Programme (NACP), barriers to HIV/AIDS management, the role of international collaboration, addressing marginalized populations, and suggestions for program improvement. Through their responses, health workers shared valuable insights into the successes, challenges, and potential strategies to enhance the impact of the NACP.

Regarding perceptions of NACP effectiveness, participants generally acknowledged the program's success in urban areas, where clinics are better equipped and antiretroviral therapy (ART) is more readily available. One health worker emphasized, "In urban areas, we've seen a significant reduction in HIV-related morbidity and mortality because of ART availability" (Health Worker, 38 years). This sentiment aligns with existing literature, which highlights the success of ART in reducing HIV-related health issues in well-resourced areas (Fitzgerald et al., 2020). However, the situation in rural areas remains concerning, with limited access to care and a continued need for more robust preventive measures and community outreach programs. As another participant pointed out, "Rural areas are still underserved, and the focus needs to shift toward preventive outreach" (Health Worker, 40 years), echoing findings from other studies that stress the urban-rural disparity in healthcare access (Amoah et al., 2021).

In terms of barriers to HIV/AIDS management, stigma and discrimination were identified as major obstacles to effective care. Fear of judgment and social stigma were repeatedly mentioned as factors deterring individuals from seeking HIV testing and adhering to treatment protocols. A participant shared, "People avoid getting tested because they fear being judged, and even health workers sometimes reinforce this fear" (Health Worker, 34 years). This observation resonates with broader research on the role of stigma in hindering HIV testing and

treatment adherence (Kassler et al., 2019). Additionally, cultural and religious beliefs were found to exacerbate stigma, with some communities viewing HIV as a moral failing, which further discourages individuals from seeking care (Tetteh & Doku, 2021). Resource constraints were another challenge, with shortages of test kits, medications, and inadequate staffing frequently mentioned. This finding reflects broader concerns about resource limitations in HIV/AIDS management across sub-Saharan Africa (Moyo et al., 2020). Furthermore, misinformation and myths surrounding HIV/AIDS were seen as critical barriers that undermine both prevention and treatment efforts (Osei et al., 2020).

When discussing the role of international collaboration, participants emphasized the importance of global partnerships, such as those with PEPFAR and the Global Fund, in sustaining free ART programs and providing technical support. One health worker noted, "International support has been crucial in maintaining ART programs, but we must find ways to reduce our dependence on external aid" (Health Worker, 36 years). This concern is echoed in existing literature, which warns about over-reliance on external funding and stresses the need for stronger domestic funding mechanisms to ensure long-term program sustainability (Morris et al., 2021). Moreover, participants highlighted the importance of adapting international strategies to local cultural contexts to maximize the relevance and impact of interventions (UNAIDS, 2020).

The challenge of reaching marginalized populations emerged as another critical theme. Health workers identified key populations such as men who have sex with men (MSM), sex workers, and adolescents as particularly hard to reach due to compounded stigma. One participant explained, "These groups face stigma not only from the general population but also from within the healthcare system" (Health Worker, 42 years). To address this, participants stressed the need for confidential services and safe spaces where these groups can access care without fear

of judgment. Research supports this view, emphasizing that tailored, stigma-free services are essential to improving health outcomes for key populations (Bwalya & Mwansa, 2021).

Finally, participants provided several suggestions for improving the NACP. Strengthening community education emerged as a key recommendation, with many participants suggesting that local leaders, such as chiefs and religious figures, could play a pivotal role in combating stigma and myths surrounding HIV. One health worker stated, "Engaging local leaders can help break down barriers and increase community support for HIV services" (Health Worker, 39 years). Leveraging technology, such as SMS reminders for ART adherence, was also suggested as a way to improve patient engagement and adherence to treatment regimens. The use of mobile health technologies in HIV care has been shown to be effective in enhancing patient adherence and retention in treatment programs (Nguyen et al., 2019). Furthermore, participants called for better resource allocation to ensure a consistent supply of essential HIV care items, such as test kits and medications, and to address staffing shortages. These findings are consistent with the ongoing calls for improved funding and resource management in HIV/AIDS care (Tetteh & Doku, 2021).

In summary, health workers' experiences reflect both the successes and ongoing challenges of the NACP. While progress has been made in urban areas, significant barriers remain, particularly in rural regions and among marginalized populations. International collaboration, community engagement, and improved resource allocation were highlighted as key areas for strengthening the national response to HIV/AIDS in Ghana.

Table 3: Themes emerging from health workers (Nurses)

Main Theme	Sub-Theme	Key Issues Raised
Perceptions of NACP Effectiveness	Success in urban areas	Well-equipped clinics improve outcomes in urban settings, but rural areas still face access challenges.
	ART success	Widespread availability of ART has reduced HIV-related morbidity and mortality.
	Limited community outreach	Insufficient focus on preventive measures and early testing.
Barriers to Effective HIV/AIDS Management	Stigma and discrimination	Fear of judgment and gossip discourages individuals from accessing care or adhering to ART.
	Cultural and religious beliefs	HIV is perceived as a curse or moral failure, complicating stigma reduction efforts.
	Misinformation and myths	Beliefs in herbal cures or condom-related misconceptions undermine prevention and treatment efforts.
Role of International Collaboration	Importance of external aid	Programs the Global Fund sustain free ART and other interventions.
	Risk of over-reliance on aid	Concerns about reduced donor funding and the need for stronger domestic funding mechanisms.
	Adapting global strategies	International best practices must be tailored to local cultural contexts for effectiveness.

Main Theme	Sub-Theme	Key Issues Raised
Addressing Marginalized Populations	Challenges for key populations	Double stigma for sex workers, and others prevents access to care.
	Lack of confidential services	Absence of safe spaces discourages marginalized groups from seeking health services.
Successes in HIV/AIDS Management	ART rollout	ART has significantly reduced AIDS-related deaths.
	Public education campaigns	Awareness programs have improved knowledge and reduced stigma.
Suggestions for Program Improvement	Strengthening community education	Engaging chiefs, pastors, and opinion leaders to tackle stigma and misinformation.
	Leveraging technology	Introducing SMS reminders to improve ART adherence.
	Health worker training	Regular workshops to update knowledge on HIV treatment protocols.
	Resource allocation	Ensuring a steady supply of test kits, medications, and adequate staffing.

4.2.2 Perceptions of Health Workers on the Effectiveness of NACP

Health workers acknowledged the significant success of the National AIDS Control Programme (NACP) in providing antiretroviral therapy (ART) and reducing HIV-related morbidity. However, they also highlighted ongoing challenges in achieving universal coverage,

particularly in rural areas. One participant noted, "The program is effective in urban areas where clinics are well-equipped, but rural areas are still lagging due to access issues" (Nurse, 34 years). This observation aligns with previous studies that show disparities in healthcare access between urban and rural populations, especially in the context of HIV care (Amoah et al., 2021).

Another health worker emphasized the positive impact of ART on the lives of many individuals living with HIV, stating, "Thanks to the NACP, many people living with HIV can live normal lives, but we still struggle to convince others to come forward for testing" (ART Counselor, 40 years). This points to the success of ART in improving health outcomes but also underscores the continuing challenge of early diagnosis and the stigma that may deter individuals from seeking testing (Tetteh & Doku, 2021).

Participants stressed the need for a more proactive approach to community outreach. One public health officer remarked, "Many people only seek help when symptoms worsen. We need to focus more on preventive measures" (Public Health Officer, 37 years). This statement reflects the importance of early intervention and prevention strategies, which are critical to reducing the transmission of HIV and improving long-term health outcomes. Similar views are echoed in the literature, which stresses the importance of shifting the focus from treatment to prevention in order to curb the spread of HIV (Fitzgerald et al., 2020).

While the NACP has made significant strides in reducing HIV-related morbidity, challenges remain in expanding access to care, particularly in rural areas, and in encouraging individuals to seek testing and prevention services earlier. Proactive community outreach and prevention strategies are essential to overcoming these barriers and ensuring broader program effectiveness.

4.2.3 Barriers to Effective HIV/AIDS Management

4.2.3.1 Stigma and Discrimination

Stigma continues to be a significant barrier to HIV testing and treatment, with many individuals reluctant to seek care due to fear of judgment and social exclusion. One participant shared, "Some people would rather die in silence than come to the clinic because they're afraid of what others will think" (Nurse, 29 years). This sentiment aligns with previous studies that have highlighted how societal stigma associated with HIV can prevent individuals from seeking testing and treatment, particularly in more conservative or rural areas (Ghana AIDS Commission, 2020).

Another nurse described a particularly distressing case, saying, "We had a patient who stopped ART because neighbors found out and started gossiping about her. It's heartbreaking" (Nurse, 35 years). This example underscores the profound impact that social stigma can have on an individual's health decisions, leading them to discontinue vital treatment due to fear of gossip and judgment (Tetteh & Doku, 2021).

Cultural and religious beliefs also complicate efforts to reduce stigma. One participant remarked, "In some communities, HIV is seen as a curse or punishment for immoral behavior, making it harder to address openly" (Nurse, 32 years). These beliefs perpetuate misconceptions about HIV and further isolate affected individuals, making it more difficult for public health interventions to effectively reach and support these populations. Previous studies have similarly documented how cultural and religious factors can exacerbate stigma and hinder HIV prevention and treatment efforts (Fitzgerald et al., 2020).

The persistence of stigma, compounded by cultural and religious beliefs, continues to create significant challenges in HIV care and prevention. Addressing these social barriers requires

comprehensive, culturally sensitive strategies that engage communities in open discussions and promote understanding.

4.2.3.2 Misinformation and Myths

Myths about HIV/AIDS continue to undermine prevention efforts and fuel mistrust in modern medicine. One health worker shared, "Some people still believe that HIV can be cured by herbal remedies, so they don't bother with ART" (Nurse, 32 years). This reflects the persistence of traditional beliefs and misconceptions, which contribute to a lack of trust in medical treatment and discourage adherence to scientifically proven therapies such as antiretroviral therapy (ART). Similar findings in the literature show that these myths, particularly in rural areas, can significantly hinder HIV prevention and treatment programs (Fitzgerald et al., 2020).

Another participant pointed out, "We've heard people claim that using condoms causes infertility, which discourages their use" (Program Coordinator, 33 years). This myth about condoms causing infertility contributes to low condom usage, which is a critical barrier to preventing HIV transmission. Such misconceptions not only perpetuate the spread of HIV but also hinder broader public health initiatives aimed at controlling the epidemic (Amoah et al., 2021).

Regarding international collaboration, participants emphasized the importance of global partnerships in funding and providing technical support for the NACP. One program coordinator stated, "Organizations like PEPFAR and the Global Fund are the backbone of our HIV response. Without their support, we couldn't sustain free ART programs" (Program Coordinator, 42 years). This highlights the pivotal role of international donors in sustaining HIV care programs, especially in resource-limited settings like Ghana, where domestic funding may not be sufficient (Tetteh & Doku, 2021).

However, concerns about over-reliance on external aid were also raised. As one public health officer remarked, "What happens if funding from donors reduces? We need to strengthen domestic funding to avoid future crises" (Public Health Officer, 32 years). This underscores the importance of developing sustainable domestic funding mechanisms to ensure the long-term continuity of HIV programs and reduce vulnerability to fluctuations in external aid (Ghana AIDS Commission, 2020).

Finally, participants noted the benefits of adapting international best practices to Ghana's local context. One public health officer commented, "Global strategies have helped, but we need culturally sensitive programs that address unique local challenges" (Public Health Officer, 36 years). This observation is consistent with existing research, which suggests that global strategies must be tailored to fit the cultural, social, and economic realities of the local context to be effective (Fitzgerald et al., 2020).

4.3.3.3 Addressing Marginalized and High-Risk Populations

4.3.3.3 Challenges in Reaching Key Populations

Reaching key populations such as sex workers and adolescents remains a persistent challenge in HIV/AIDS management. One participant emphasized the compounded stigma these groups face: "Key populations face double stigma—one for being HIV positive and another for their lifestyles. This keeps them away from seeking help" (Nurse, 32 years). This dual stigma—related to both HIV status and lifestyle—prevents these populations from seeking care. Another participant shared a similar concern: "Many sex workers don't come to clinics because they fear judgment, even from health workers" (Nurse, 29 years). This highlights the critical need to address stigma within healthcare settings, as it serves as a barrier to accessing care. Literature has long emphasized that sex workers, in particular, avoid seeking healthcare due to fear of being judged by both the public and health professionals (Duncan et al., 2019).

The importance of confidential, targeted interventions to address these barriers was underscored by participants. One nurse stated, "We need safe spaces where key populations feel comfortable accessing services without fear" (Nurse, 27 years). This statement echoes the growing consensus in global HIV response strategies that creating non-judgmental, private spaces is essential for encouraging these marginalized groups to seek care (Bola et al., 2020).

4.3.3.4 Successes in HIV/AIDS Management

Despite the challenges, there have been notable successes in Ghana's HIV/AIDS management efforts. One of the most significant achievements highlighted by participants was the widespread availability of antiretroviral therapy (ART). One program coordinator shared, "We've seen a dramatic reduction in AIDS-related deaths thanks to the widespread availability of ART" (Program Coordinator, 38 years). This aligns with global research that has shown ART to be a critical factor in reducing HIV-related mortality in sub-Saharan Africa (Tugume et al., 2021).

Additionally, mobile clinics have played a crucial role in improving access to HIV services in remote areas. One nurse mentioned, "Mobile clinics have been a game-changer, bringing services to remote areas that previously had no access" (Nurse, 35 years). Mobile clinics have been increasingly recognized as a successful intervention to reach underserved populations, ensuring that healthcare services are available to those who might otherwise be excluded (Toska et al., 2021). Public education campaigns, particularly those conducted during World AIDS Day events, have also contributed to increased awareness of HIV: "Educational programs have increased awareness, especially during World AIDS Day events" (Public Health

Officer, 32 years). Such campaigns help to reduce stigma and increase the public's understanding of HIV prevention and care.

4.3.3.5 Suggestions for Program Improvement

Participants offered several actionable recommendations to strengthen the National HIV/AIDS Control Program (NACP). One of the most frequently mentioned suggestions was to enhance community education. One nurse remarked, "We should involve chiefs, pastors, and other opinion leaders to combat myths and stigma at the grassroots level" (Nurse, 33 years). Engaging community leaders in public health education is widely acknowledged as an effective way to combat stigma and improve HIV prevention efforts, as these leaders hold significant influence in local communities (Chin et al., 2020).

Another key recommendation was to leverage technology to improve service delivery. One program coordinator suggested, "Introducing SMS reminders for ART appointments could improve adherence significantly" (Program Coordinator, 38 years). Research has shown that SMS reminders can play a crucial role in improving ART adherence by helping patients remember appointments and medication schedules, thereby reducing the likelihood of treatment interruptions (McMahon et al., 2018).

Finally, participants stressed the need for ongoing training of healthcare workers. One public health officer recommended, "Regular workshops on updated HIV treatment protocols would improve service delivery" (Public Health Officer, 37 years). Ongoing training ensures that healthcare providers are well-versed in the latest treatment guidelines, which ultimately improves the quality of care that patients receive (Risher et al., 2019).

4.4 Funding Challenges and Over-Reliance on Donor Aid

Your study highlights significant funding challenges, including over-reliance on international donors like PEPFAR and the Global Fund. While these organizations have been instrumental in supporting Ghana's HIV response, global reports caution against unsustainable dependence. The UNAIDS 2024 report notes that many low- and middle-income countries face a potential funding crisis as international aid declines, with domestic resources failing to fill the gap (UNAIDS, 2024).

In Ghana, reduced donor funding could jeopardize free ART programs and limit outreach efforts to underserved areas. Comparatively, countries like South Africa have taken proactive measures by increasing domestic investments in HIV programs, ensuring sustainability despite reduced international funding. Ghana could learn from such models by strengthening public-private (WHO, 2024).

4.5 Community Engagement and Policy Reforms

Your findings emphasize the need for enhanced community engagement and policy reforms, such as decriminalizing key populations. Globally, leveraging peer educators has been a successful strategy for improving service uptake among marginalized groups. For instance, Kenya and Uganda have implemented peer-led initiatives in slums and rural areas, resulting in higher testing rates and ART adherence (Sunguti et al., 2019).

Decriminalization is another critical aspect. Participants in your study advocate for policy changes to reduce stigma and increase access to care. This aligns with UNAIDS' call to decriminalize key populations, as criminalization often forces these groups into hiding, making them harder to reach with preventive and treatment services (UNAID, 2024). Success stories from countries like Portugal, which decriminalized drug use, demonstrate how progressive policies can significantly reduce health disparities

4.5.1 ART Rollout and Mobile Clinics

The success of ART rollout and mobile clinics in Ghana aligns with global trends in improving access to treatment. The current study highlights the role of mobile clinics in reaching remote areas, a strategy also adopted in countries like India and Nigeria, where geographical barriers impede access to healthcare facilities (UNAID, 2024). Globally, 30.7 million people accessed ART in 2023, with significant reductions in AIDS-related deaths observed wherever ART was scaled up (WHO, 2024)

Mobile clinics are particularly effective in regions with high rural populations, addressing issues of access and stigma by providing confidential and localized services. For Ghana, expanding these initiatives could further reduce disparities between urban and rural areas, as noted in your findings.

CHAPTER 5

Summary, Conclusion and Recommendations

5.0 Overview of Chapter 5

Chapter 5 summarizes the key findings of the study, highlighting both the successes and challenges of the National HIV/AIDS Control Program (NACP) in Ghana. It draws conclusions on the effectiveness of the program, noting achievements such as the rollout of ART and urban access to care, while recognizing challenges like stigma, rural disparities, and funding limitations. The chapter concludes with recommendations to improve the program, including enhancing community education, addressing stigma, expanding services to underserved areas, and strengthening domestic funding and health worker training. These recommendations aim to improve HIV care access and sustainability in Ghana.

5.1 Summary

This study aimed to assess the effectiveness of the National HIV/AIDS Control Program (NACP) in Ghana by gathering perspectives from health workers involved in HIV care. The research identified key themes that reflect both the successes and challenges faced in the country's HIV response. In-depth interviews were conducted with a diverse group of healthcare providers, including nurses, public health officers, and program coordinators, to obtain a holistic view of the program's performance and areas for improvement.

The findings revealed that the NACP has had notable successes, particularly in urban areas, where access to antiretroviral therapy (ART) and HIV-related healthcare services has improved. However, significant challenges remain in rural regions, where access to care is limited due to resource constraints, inadequate infrastructure, and staffing shortages. Stigma and discrimination continue to pose significant barriers to HIV testing and treatment adherence,

particularly for key populations such as sex workers, men who have sex with men (MSM), and adolescents.

International collaborations, including funding and technical support from organizations like PEPFAR and the Global Fund, were recognized as critical to sustaining ART programs. However, concerns were raised about Ghana's over-reliance on external aid and the need to diversify funding sources for long-term sustainability. Health workers also highlighted the importance of community-based interventions and culturally sensitive approaches to addressing the unique challenges faced by marginalized groups.

5.2 Conclusion

In conclusion, the National HIV/AIDS Control Program in Ghana has made significant strides in reducing HIV-related morbidity and mortality, particularly through the provision of ART and the expansion of services in urban areas. However, substantial gaps remain in ensuring equitable access to healthcare in rural areas, addressing the stigma that surrounds HIV, and overcoming cultural barriers to care. Despite the achievements, the program is still challenged by limited resources, inadequate staffing, and the need for stronger community engagement and education.

The reliance on external funding sources, while essential in sustaining key programs, also highlights the vulnerability of the HIV response in Ghana. To achieve long-term sustainability, it is crucial for the country to strengthen domestic funding mechanisms and develop locally adapted strategies that are both culturally and contextually relevant.

5.3 Recommendations

Based on the findings of this study, the following recommendations are made:

1. Strengthening Community Education and Awareness: A targeted and sustained effort to educate the public about HIV/AIDS is essential. This should include addressing myths, misconceptions, and stigma associated with the disease, particularly through the involvement of community leaders such as chiefs, pastors, and other influential figures. Public education campaigns should also emphasize preventive measures, such as the importance of regular HIV testing and consistent ART adherence.

2. Expanding HIV Services to Rural Areas: The government should prioritize the expansion of HIV care and treatment services to underserved rural areas. This includes improving healthcare infrastructure, providing adequate staffing, and ensuring a consistent supply of HIV-related medications and testing kits. Mobile clinics and outreach programs should also be scaled up to reach remote populations.

3. Addressing Stigma and Discrimination: Efforts to reduce stigma and discrimination must be a central focus of the NACP. Health workers should receive regular training in providing non-judgmental and confidential care. Additionally, community-based organizations and advocacy groups can play a key role in promoting acceptance and encouraging key populations to seek care without fear of judgment.

4. Strengthening Domestic Funding: While international support remains crucial, Ghana must work towards increasing domestic funding for HIV programs. The government should explore innovative financing options, including public-private partnerships and reallocating resources within the health sector, to ensure the sustainability of the HIV response.

5. Enhancing Training and Capacity Building for Health Workers: Regular training programs should be established for health workers to ensure they are up-to-date with the latest HIV treatment protocols, prevention strategies, and approaches to addressing stigma. This would

improve the quality of care provided and empower healthcare professionals to be more effective in their roles.

6. Tailoring Programs for Marginalized Populations: Interventions for marginalized populations, such as sex workers, MSM, and adolescents, should be adapted to meet their unique needs. This includes providing confidential, non-judgmental services in safe spaces where individuals feel comfortable seeking care. Additionally, peer educators and outreach programs should be utilized to break down barriers and encourage these groups to access HIV-related services.

By implementing these recommendations, Ghana can improve the effectiveness and reach of the NACP, ensuring that the HIV response is more inclusive, equitable, and sustainable in the long term.

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APPENDICES

Appendix I (Detailed work plan)

Activity	**Duration**						
Activity	Jan - June 2023	August 2024	August 2024	September 2024	November 2024	November 2024	December 2024
Proposal development and Defence							
Recruitment and training of data collectors							
Data collection							
Data entry and cleaning							
Data analysis							
Report writing							
Presentation of project							

Appendix II (Detailed budget)

No.	Item	Number	Frequency	Unit Cost (GH¢)	Total (GH¢)
1	Proposal Printing	2	1	100	200
2	Questionnaire & Informed Consent Printing	388	1	10	3,880
3	Training of Data Collectors and team	5	2	50	500
4	Transportation	5	3	150	2,250
6	Field allowance, & feeding for data collectors				4,000
8	Final Printing				300
9	10% Contingency				1,113
10	**Grand Total**				**12,243**

Appendix III: INFORMED CONSENT

SECTION A: BACKGROUND

Title of Study:	International Response to HIV/AIDS Pandemic: The Case of National HIV/AIDS Control Programme in Ghana.
Principal Investigators	Dr. Benjamin Sena Dzameshie

SECTION B: CONSENT TO PARTICIPATE IN RESEARCH

General Information about Research

I am Dr. Benjamin Sena Dzameshie a Masters student of University of Ghana, and I am conducting this study in the Region to see the International Response to HIV/AIDS Pandemic: The Case of National HIV/AIDS Control Programme in Ghana.

Benefits/ Risks

There will be no direct benefit associated with your participation in this study. However, your responses will help inform planners in decision-making concerning developing of strategies to enhance knowledge and determine International Response to HIV/AIDS Pandemic. There are no possible risks associated with participating in this study.

Confidentiality and Anonymity

You have the choice of taking part in this study or not. Before you participate, it is crucial that you are aware of all the study's requirements.

Take your time to read the following information carefully, and if you have any questions, ask the researcher.

It will take you around 20 - 30 minutes to participate in this study, and we appreciate your honesty in answering the questions.

Data obtained from this study will be handled anonymously hence your privacy and confidentiality are assured. We will not use your name or any other personal information that would identify you. To help protect your confidentiality, a unique data code will be given to your responses and kept in a file on a computer. The file will be encrypted with a password and only the researchers will have access to it.

Withdrawal from the study

You are free to leave during the process of the study without any punishment if you are not comfortable.

Compensation

There will be no compensation for your participation in this research. However, words of appreciation will be offered by thanking you for spending your time and effort to participate in this research.

Contact for additional information

If you have any questions about your rights as a research participant in this study you may contact …… You can also contact the principal investigator or the Supervisor on the following, if you need further information regarding this study.

Dr. Benjamin Sena Dzameshie

Prof …… Email: ……University of Ghana.

SECTION C: PARTICIPANT AGREEMENT

Participant Agreement

You have the choice to agree or not agree to participate in this study by providing the following information: "I have read all the above and asked questions, received answers regarding participation in this study, and I am willing to give consent to participate in this study. I will not have given up any of my rights by signing this consent form. Upon signing this consent form I will receive a copy for my personal records". Please if you agree to participate in this study sign in the space provided.

Name of Participant

_____

Signature/Thumbprint of participant _____ Date: _____

If participant cannot read and or understand the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

_____

Name of witness

_____ _____

Signature of witness / Mark Date

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

_____

Name of Person Who Obtained Consent

_____ _____

Signature of Person Who Obtained Consent Date