

Qualitative Analysis of Policies and Social, Economic, and Cultural Factors on HIV/AIDS Incidence Rates

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ABSTRACT

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Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) remains a major public health problem in Indonesia, with marked disparities in prevention and treatment across regions. This study aims to examine government policies and the social, economic, and cultural factors influencing HIV/AIDS incidence through comparative case studies in North Maluku, Yogyakarta, and Central Java. This research used a qualitative multiple-case study design. Data were collected through in-depth interviews, focus group discussions, and a review of secondary documents and program data. The study population comprised key stakeholders involved in HIV prevention and care, including provincial and district health authorities, facility-based providers, non-governmental organizations, peer educators, and representatives of key populations receiving services. Participants were selected using purposive sampling, complemented by snowball sampling to reach hard-to-access community actors. Data were analyzed using thematic analysis through data reduction, data display, and conclusion drawing. Findings indicate that the implementation of the Healthy Indonesia with a Family Approach Program has been uneven. In North Maluku, HIV testing coverage among transgender women and their partners remains below 60%, while reported incidence continues to increase. In Yogyakarta, spatial and social dynamics shape transmission patterns, with geographic information system analysis identifying persistent hotspots associated with sex work areas. Central Java demonstrates comparatively stronger outcomes through collaborative governance, where egalitarian partnerships among health authorities, Non-Governmental Organizations, and peer groups expand access to services despite resource constraints. The study concludes that national policies are comprehensive, but effective control requires locally tailored adaptation, stronger intersectoral collaboration, and meaningful community participation to reduce disparities and enhance program sustainability.



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INTRODUCTION

Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) remains a significant global health challenge, extending its impact beyond mere biological concerns to profoundly affect social, economic, and psychological aspects of life due to the persistent stigma associated with the disease (Armoon et al., 2021; Dessie & Zewotir, 2024; Tadesse et al., 2024). As of 2021, an estimated 40.0 million people were living with HIV worldwide. While global new HIV infections decreased to 1.65 million in 2021, and HIV-related deaths declined to 718,000 in the same year (Carter et al., 2024). The psychosocial distress and poorer quality of life experienced by those living with HIV/AIDS due to stigma continue to be critical issues (Armoon et al., 2022; Dessie & Zewotir, 2024; Tadesse et al., 2024).

In Indonesia, the fight against HIV/AIDS continues. As of 2020, approximately 540,000 individuals were living with HIV, with new infections reported to be between 25,000 and 28,000 in 2021 (Jocelyn et al., 2024). More recent data from 2022 indicates a total of 62,856 HIV and AIDS

cases across the nation, comprising 52,955 HIV cases and 9,901 AIDS cases (Salbila & Usiono, 2023). Provinces such as DKI Jakarta, East Java, West Java, and Central Java reported substantial numbers of HIV cases by June 2022 (Sukatemin et al., 2022). At a regional level, Semarang City recorded 278 HIV cases and 15 AIDS cases in 2019, 201 HIV cases and 15 AIDS cases in 2020, and 182 HIV cases and 23 AIDS cases in 2021. In Yogyakarta, 114 people were reported to be living with HIV/AIDS in 2022 (Widiastuti & Fibriana, 2022).

Previous research highlights various obstacles to HIV prevention and control efforts, including unclear communication, insufficient resources (especially staff availability), inadequate facilities, and a lack of community support (Irawan et al., 2024; Istiqomah, 2020; Mwangome et al., 2017; Zarnaq et al., 2017). Furthermore, fragmentation within bureaucratic structures has been identified as a factor affecting the implementation of HIV/AIDS policy (Zarnaq et al., 2017). Despite the implementation of numerous policies and programs for prevention and control, discrimination against individuals with HIV/AIDS remains prevalent, manifesting in verbal discrimination, social avoidance, and exclusion within communities and even families (Asrina et al., 2023; Mukminin et al., 2023).

Effective prevention strategies emphasize avoiding risky behaviors, maintaining fidelity to one partner, practicing safe sex, using sterile equipment, and undergoing HIV testing before blood transfusions. Moreover, early education and awareness campaigns are crucial for identifying risk factors and promoting early detection, forming a foundation for comprehensive anticipation, care, and support (Hubaybah et al., 2021). Economic, social, and cultural aspects are recognized as significant risk factors that can accelerate HIV/AIDS cases (AIDS cases have increased and are still being found in 2024). Addressing these multifaceted challenges requires a holistic approach that integrates policy improvements, resource allocation, and sustained community engagement to mitigate the impact of HIV/AIDS and combat associated stigma. This study, therefore, aims to conduct a qualitative analysis of policies and socio-economic and cultural factors influencing HIV/AIDS incidence, with an in-depth exploration of the implementation of prevention and control policies among stakeholders and the general public in key regions, including North Maluku Province, Yogyakarta Province, and Central Java Province.

METHOD

The method used in this study is qualitative. This qualitative study uses interviews, focus group discussions, and literature reviews to gain an in-depth understanding of the factors influencing the implementation of HIV/AIDS prevention and control policies among stakeholders and the general public. The research locations are several provinces in Indonesia, namely North Maluku Province (with a focus on Ternate and Halmahera), Yogyakarta Province (Yogyakarta City), and Central Java Province (Semarang City).

The research employed a purposive sampling strategy to select participants who possessed rich information and direct experience relevant to the study's objectives (Ahmad & Wilkins, 2024; Tuckerman et al., 2020). This approach aimed to select individuals who could offer significant insights into the implementation of HIV/AIDS prevention and control in Yogyakarta, Semarang, North Maluku, and Halmahera Island (Silva & Ribeiro, 2024). The informant group included the Head of the Health Office, the Head of the P2P Division, the Head of the Community Health Center, the HIV/AIDS Program Coordinator at the Community Health Center, the Head of the Sub-district Office, religious leaders, community leaders, health cadres, and HIV/AIDS patients.

Inclusion criteria for participants involved their active role or direct experience with HIV/AIDS prevention and control programs, or being directly affected by HIV/AIDS, in the specified regions. Participants also needed to be willing to provide informed consent and to articulate their experiences and perspectives. Exclusion criteria included individuals who were unable to provide informed consent or had limited relevant knowledge on the research topic. The sample size was determined by data saturation, in which data collection continued until no new themes or significant insights emerged from the interviews and discussions.

Data were primarily collected through in-depth semi-structured interviews and focus group discussions. Interview guides and Focus Group Discussion (FGD) protocols were developed based on the research questions and literature review to ensure comprehensive coverage of key themes while allowing flexibility for emergent topics and participant narratives. All interviews and FGDs were audio-recorded with participants' explicit consent and subsequently transcribed verbatim. Field notes were also taken during data collection to capture non-verbal cues, contextual information, and initial analytical thoughts. Literature studies were conducted concurrently to contextualize the primary data, identify gaps in existing knowledge, and inform the development of interview and FGD questions.

The study strictly adhered to ethical principles for human subjects research, as guided by the ethical clearance obtained (No. 006/KEPK-J/1/2025). Before any data collection commenced, all potential participants received detailed information about the study's purpose, procedures, voluntary nature of participation, potential risks, and benefits. Informed consent was obtained from all participants, documented either through a signed consent form or verbal consent for those with literacy challenges, which was also audio-recorded. Participants were assured of their right to withdraw from the study at any point without penalty.

Confidentiality and anonymity were maintained throughout the research process. Participants' identifying information was pseudonymized or anonymized in all transcripts and research outputs. All collected data were stored securely in password-protected digital files accessible only to the research team. The privacy and well-being of HIV/AIDS patients participating in the study were prioritized, with particular sensitivity to the stigma often associated with the disease.

The data analysis followed a rigorous qualitative process, including data collection, data reduction, data presentation, and conclusion drawing. Specifically, a thematic analysis approach was utilized to identify, analyze, and report patterns (themes) within the data. The coding process involved several stages, adapted from Braun and Clarke's framework. To ensure the trustworthiness and rigor of the findings, triangulation was employed. This involved using multiple data sources (interviews, FGDs, literature reviews) to corroborate findings and enhance the credibility of the interpretations.

RESULTS

Understanding and implementation of policies

The Healthy Indonesia with a Family Approach Program has set Minimum Service Standards for key populations, yet disparities in implementation remain across regions. North Maluku provides a striking example: HIV testing coverage among transgender women and their partners is still below 60%, while HIV incidence rose sharply in 2024. This contrast underscores that although national policies are well designed, their execution has not been fully effective in reaching high-risk groups.

Interviews revealed that many individuals only became aware of HIV-related policies after receiving a diagnosis. Initially, knowledge was very limited, and only through treatment and assistance did understanding begin to grow. As one participant explained,

"At that time, my condition was not good. Initially, I did not know anything, but after receiving assistance, I finally understood the importance of medication" (JA). Another admitted, "I know, this year, I have only been taking medication for 3 months, before that I did not know what HIV was" (IH).

Another informant shared a similar story:

"I found out I had HIV in November 2024, actually, it was just because I was sick, and then I got tested. Only then did I know I had to follow the rules for taking medication" (AH).

These opinions highlight that policy communication and outreach are often reactive rather than proactive, with knowledge coming only after illness or diagnosis. Yogyakarta presents a different picture, where spatial and social dynamics strongly shape policy implementation. Research using Geographic Information Systems successfully identified HIV hotspots in Gedongtengen District, an area closely linked to prostitution activity. This evidence reinforces that policies cannot be applied uniformly; instead, they must be contextualized and adapted to local epidemiological realities. Targeting interventions to high-risk geographic areas is critical to increasing policy effectiveness and maximizing impact.

Central Java demonstrates the potential of collaborative governance as a strategy to strengthen implementation. Here, cooperation among the Health Office, Non-Governmental Organizations, and peer communities is relatively egalitarian, minimizing hierarchical barriers and fostering shared responsibility. This approach has been effective in broadening access to services for people living with HIV, though challenges remain in terms of limited human resources and budget constraints. The experience from Central Java illustrates that aligning policy understanding with on-the-ground collaboration can significantly improve program outcomes, even in the face of resource limitations.

Economic, social, and cultural factors

North Maluku illustrates that social barriers such as stigma, shame, and lack of knowledge remain the main obstacles to HIV prevention and treatment, while economic factors are relatively less dominant. In contrast, Yogyakarta faces different challenges where urban lifestyle choices, injecting drug use, and socializing patterns play a central role in increasing transmission. Spatial analysis has also demonstrated that spatial and social factors are intertwined, forming consistent clusters of HIV transmission over time. Meanwhile, in Central Java, economic vulnerabilities are more apparent, particularly among migrant workers and commercial sex workers. In rural areas, conservative cultural values reinforce stigma, discouraging people living with HIV from seeking care. On the other hand, urban areas tend to be more permissive, which facilitates the acceptance of educational interventions. This rural–urban divide helps explain the variation in HIV prevalence across Central Java.

Almost all patients emphasized that their infection was not driven by economic factors, but rather by lifestyle choices and unprotected sexual relations. Social stigma further compounded their experiences, forcing many to remain silent and conceal their status. This was reflected in several participants' statements: As one participant explained,

"No, because no one knows my status" (JA).

Another clarified:

"Having sex is not for money, but for personal satisfaction" (IH).

Similarly, others shared the same sentiment:

"Having sex is not about money, but for satisfaction" (AH)

"It is not done for economic reasons, but out of personal awareness" (AB)

Moreover, "It is not done for money, but out of curiosity and experimentation" (FB).

These narratives highlight the strong role of individual choices and psychosocial influences compared to purely economic motives, while also underscoring how stigma limits disclosure and access to care. Moving to expectations and recommendations, patients in North Maluku expressed hope that health workers could take a more proactive role in outreach and counseling, rather than passively waiting at health facilities. In Yogyakarta, demand focused more on improving the quality of education, particularly through school-based and student community programs. This aligns with findings from longitudinal studies that show peer involvement can significantly improve long-term treatment adherence, suggesting that structured peer-support programs should be expanded. In Central Java, the priority is ensuring an equal distribution of services,

especially to underserved rural areas, while also enhancing inter-agency coordination. Additionally, strengthening cross-sector data integration is essential to avoid fragmented reporting systems. Complementing these recommendations, clinical findings from Dr. Sardjito General Hospital highlight the potential of integrating biomarkers such as CRP and PCT into HIV clinical protocols, which could accelerate the diagnosis and management of comorbidities among people living with HIV/AIDS.

DISCUSSION

This study highlights the disparity in the implementation of HIV/AIDS policies under the Program Indonesia Sehat with a Family Approach (PIS-PK). In North Maluku, HIV testing coverage among transgender women and partner notification was below 60%, while HIV incidence increased sharply in 2024. These results suggest that although national policies and Minimum Service Standards (SPM) were designed comprehensively, their execution in the field has not effectively reached high-risk populations. Similar conclusions were reported by Istiqomah (2020), who noted that a mismatch between policy design and local implementation capacity remains a major barrier to meeting HIV indicators.

The identification of HIV hotspots in Gedongtengen, Yogyakarta, through Geographic Information System (GIS) analysis provides insight into why generalized policies may fall short. Local transmission was closely linked to prostitution and population mobility, reinforcing that implementation must be contextualized to local epidemiological patterns rather than applied uniformly. This finding is consistent with spatial analyses in Surabaya and Palembang, which demonstrated clustering of HIV cases in specific districts with high-risk venues (Rahmah, 2024). Thus, the lower HIV testing rates observed in North Maluku can be partly explained by the absence of spatially targeted interventions.

In contrast, the relative success of collaborative governance in Central Java explains improved access to services and treatment retention. Partnerships among health authorities, Non-Governmental Organizations, and peer communities enabled more egalitarian service delivery and helped reduce barriers of stigma and discrimination. Hutabarat & Kismartini (2019) and Januraga et al. (2025) both emphasized that such collaborations, supported by mapping and community engagement, can enhance the reach and sustainability of HIV programs. This explains why, despite resource constraints, Central Java achieved broader service coverage compared with North Maluku.

Social and cultural contexts further explain the observed disparities. In North Maluku, stigma and limited sexual health literacy remain dominant barriers to early detection and treatment adherence. Conversely, in Yogyakarta, urban lifestyles and injecting drug use contributed to transmission clusters, while in Central Java, the economic vulnerability of migrant workers and sex workers played a larger role. These differences show that HIV policy outcomes are not determined solely by the policy framework, but by the intersection of social, spatial, and governance factors.

Overall, the findings of this study suggest that the limited HIV testing coverage and rising incidence in North Maluku can be explained by weak contextual adaptation of policy, insufficient communication strategies, and the persistence of stigma. In comparison, the use of spatial mapping in Yogyakarta and collaborative governance in Central Java demonstrates that locally tailored approaches are more effective in addressing HIV among key populations. Strengthening these adaptive and participatory mechanisms should therefore be prioritized in order to close the implementation gap between national policy and local realities.

CONCLUSION

This study reveals that HIV/AIDS policy implementation in Indonesia is characterized by regional disparities, with social, economic, cultural, and institutional factors significantly shaping outcomes. Specifically, North Maluku faces hurdles due to limited resources and stigma, Yogyakarta's spatial complexities demand localized approaches despite strong community support, and Central Java demonstrates the potential of collaborative governance amidst human resource and budget constraints. These findings emphasize that policy effectiveness is highly context-dependent, necessitating locally tailored strategies, sustained cross-sector collaboration, and targeted efforts to mitigate stigma for improved HIV/AIDS responses.

AUTHOR'S DECLARATION

Authors' contributions and responsibilities

All authors contributed substantially to the design, execution, analysis, and writing of this study. **MM, FA, ZAG, and AK**: conceptualized the research; **MM**: facilitated data collection through focus group discussions, led the thematic analysis, and supported the development of the interview guide; **MM, FA, ZAG, and AK**: contributed to coding and theme development, and assisted in refining the manuscript. All authors reviewed and approved the final version of the manuscript.

Availability of data and materials

All data are available from the authors.

Competing interests

The authors declare no competing interests.

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