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Socio-Cultural Influences on ART Adherence among People Living with HIV/AIDS in Rural Ghana

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Abstract

Background: Achieving optimal adherence to antiretroviral therapy (ART) remains a critical challenge in sub-Saharan Africa, where socio-cultural factors continue to influence treatment behaviours. Understanding these influences is essential for designing effective, context-specific interventions.

Objective: This study examined the socio-cultural determinants of ART adherence among people living with HIV (PLHIV) in Wassa Amenfi West Municipality, Ghana.

Methods: A cross-sectional survey was conducted among 602 PLHIV receiving ART at designated health facilities. Data on socio-demographic characteristics, perceived stigma, HIV status disclosure, family and community support, and cultural beliefs were collected using a structured questionnaire. Adherence was assessed through self-report and verified against clinic refill records. Chi-square tests were used to examine associations between socio-cultural variables and adherence.

Results: The majority of respondents were female (62.1%), aged 40–49 years (34.9%), and had low educational attainment (34.2% with no formal education). High perceived stigma was associated with significantly lower adherence (61.7%) compared to low stigma (86.9%, $p < 0.001$). Disclosure of HIV status to both family and friends yielded the highest adherence (90.7%), while non-disclosure was linked to the lowest adherence (50.0%, $p < 0.001$).

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Participants with family or community support demonstrated higher adherence (87.2%) than those without support (51.5%, $p < 0.001$). Belief in spiritual causation of HIV was associated with lower adherence (54.5%) compared to those rejecting such beliefs (85.6%, $p < 0.001$).

Conclusion: Socio-cultural factors exert a substantial influence on ART adherence in rural Ghana. Stigma reduction, safe disclosure facilitation, mobilisation of family and community support, and culturally sensitive engagement with traditional belief systems should be prioritised in HIV programs. These strategies are essential to improving adherence outcomes and achieving national HIV treatment targets.

Keywords: ART adherence, socio-cultural factors, HIV/AIDS, stigma, disclosure, Ghana, rural health

1. Introduction

Antiretroviral therapy (ART) has transformed HIV from a fatal condition into a manageable chronic illness, significantly reducing morbidity and mortality among people living with HIV (PLHIV) worldwide (UNAIDS, 2023). Sustained adherence—typically defined as taking at least 95% of prescribed doses—is essential for viral suppression, prevention of drug resistance, and achievement of global HIV control targets (World Health Organization [WHO], 2021). While biomedical and health system factors are critical, a growing body of evidence underscores the role of socio-cultural contexts in shaping ART adherence behaviours, particularly in rural and resource-limited settings (Shubber et al., 2016; Musumari et al., 2014).

In sub-Saharan Africa, cultural beliefs, stigma, gender norms, family dynamics, and social support networks can facilitate or hinder adherence to ART (Wekesa & Coast, 2015; Kagee et al., 2011). For example, fear of HIV disclosure due to stigma may lead to non-adherence or treatment concealment, while strong familial encouragement can enhance persistence with medication regimens (Nachega et al., 2019). In Ghana, socio-cultural dynamics intersect with health system challenges to influence treatment outcomes, especially in rural areas where traditional belief systems and communal living patterns are prevalent (Ampofo et al., 2021). Despite national progress in ART coverage, maintaining long-term adherence remains a challenge, with socio-cultural influences often underexplored in programme design and policy.

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The Wassa Amenfi West Municipality in Ghana presents a unique context where traditional beliefs, extended family systems, and rural livelihoods interact with HIV care delivery. Understanding socio-cultural influences in this setting is vital for designing interventions that are both culturally sensitive and operationally feasible. This study examines key socio-cultural factors—including stigma, disclosure, family and community support, and cultural health beliefs—that affect ART adherence among PLHIV in rural Ghana. The findings aim to inform culturally responsive strategies to improve adherence and treatment outcomes.

2. Methods

2.1 Study Design and Setting

A cross-sectional descriptive study was conducted in Wassa Amenfi West Municipality, located in the Western Region of Ghana. The municipality is predominantly rural, with dispersed settlements and limited transportation infrastructure. ART services are provided through selected health facilities, including district hospitals and community health centres.

2.2 Study Population and Sampling

The study population comprised PLHIV aged 18 years and above who had been on ART for at least six months and were attending ART clinics within the municipality. A sample size of 602 participants was determined using Cochran's formula for cross-sectional studies, accounting for a 95% confidence level, a 5% margin of error, and an estimated adherence prevalence of 50% to maximise sample size. Participants were selected through systematic random sampling from clinic attendance registers.

2.3 Data Collection

Data were collected using a structured, interviewer-administered questionnaire adapted from validated adherence assessment tools and tailored to the socio-cultural context of Ghana. The questionnaire included sections on socio-demographic characteristics, socio-cultural variables (perceived stigma, disclosure of HIV status, family and community support, cultural health beliefs), and adherence status. The tool was pretested with 30 respondents in a neighbouring district to ensure clarity and cultural relevance.

2.4 Measurement of Variables

Adherence was measured using a combination of self-reported adherence over the past 30 days and verification

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against clinic refill records. Socio-cultural factors were assessed using Likert-scale items and categorical questions:

- **Perceived stigma**: assessed through agreement with statements about community attitudes toward PLHIV.
- **HIV status disclosure**: categorised as disclosed to family, disclosed to friends, disclosed to both, or not disclosed.
- **Family and community support**: measured by reported assistance with clinic visits, reminders to take medication, and emotional encouragement.
- **Cultural health beliefs**: evaluated by assessing the influence of traditional medicine use or beliefs about spiritual causes of illness.

2.5 Data Analysis

Data were entered and cleaned in SPSS version 26. Descriptive statistics summarised participant characteristics. Chi-square tests assessed associations between socio-cultural factors and adherence status, with statistical significance set at $p < 0.05$. Results are presented in tables with corresponding narrative interpretation.

2.6 Ethical Considerations

Ethical clearance was obtained from the Ghana Health Service Ethical Review Committee. Permission was also granted by the Wassa Amenfi West Municipal Health Directorate. Written informed consent was obtained from all participants. Confidentiality was maintained by anonymising data and securing all study records.

3. Results

Table 1: Socio-Demographic Characteristics of Respondents (n = 602)

Variable	Frequency (n)	Percentage (%)
Age group (years)		
18–29	72	12.0
30–39	162	26.9
40–49	210	34.9

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≥50	158	26.2
Gender		
Male	228	37.9
Female	374	62.1
Education		
No formal education	206	34.2
Primary/Basic	228	37.9
Secondary	126	20.9
Tertiary	42	7.0
Marital status		
Single	98	16.3
Married	286	47.5
Divorced	102	17.0
Widowed	116	19.3
Duration on ART		
6–12 months	132	21.9
13–24 months	148	24.6
>24 months	322	53.5

A total of **602 PLHIV** participated in the study. The majority were female (62.1%), and the largest age group was 40–49 years (34.9%), followed by 30–39 years (26.9%). Educational attainment was low, with 34.2% having no formal education, and 53.5% had been on ART for more than 24 months.

Table 2: Perceived Stigma and ART Adherence

Stigma Level	**Adherent n (%)**	**Non-adherent n (%)**	**Total n (%)**

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High	208 (61.7)	129 (38.3)	337 (56.0)
Low	246 (86.9)	37 (13.1)	283 (47.0)

Adherence rates were markedly lower among those reporting high perceived stigma (61.7%) compared to those with low stigma (86.9%). This aligns with prior studies in Ghana and other sub-Saharan African contexts where fear of discrimination, social rejection, and gossip discourage consistent medication use. Stigma may also drive secrecy, resulting in missed doses when individuals avoid taking medication in the presence of others. These findings reinforce the importance of stigma-reduction campaigns as part of ART adherence strategies.

Table 3: Disclosure of HIV Status and ART Adherence

Disclosure Status	**Adherent n (%)**	**Non-adherent n (%)**	**Total n (%)**
Disclosed to family	268 (85.6)	45 (14.4)	313 (52.0)
Disclosed to friends	46 (78.0)	13 (22.0)	59 (9.8)
Disclosed to both	88 (90.7)	9 (9.3)	97 (16.1)
Not disclosed	52 (50.0)	52 (50.0)	104 (17.3)

The highest adherence (90.7%) occurred among those who disclosed to both family and friends, suggesting that broad social support networks improve treatment continuity. Non-disclosure was linked to only 50% adherence, reflecting challenges such as the inability to take medication openly and the absence of external reminders or encouragement. This finding is consistent with evidence that disclosure often facilitates access to practical support, emotional encouragement, and reduced internalised stigma.

Table 4: Family/Community Support and ART Adherence

Support Availability	**Adherent n (%)**	**Non-adherent n (%)**	**Total n (%)**
Yes	348 (87.2)	51 (12.8)	399 (66.3)
No	106 (51.5)	100 (48.5)	206 (34.2)

Adherence was significantly higher among those with support (87.2%) compared to those without (51.5%). Support may include transportation assistance, help with remembering doses, financial aid for clinic visits, and emotional reassurance. These findings highlight

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that community-based support systems and family involvement are critical elements of adherence programs in rural areas.

Table 5: Cultural Beliefs and ART Adherence

Cultural Belief Type	Adherent n (%)	Non-adherent n (%)	Total n (%)
Believes in spiritual causes	116 (54.5)	97 (45.5)	213 (35.4)
No spiritual cause belief	338 (85.6)	57 (14.4)	395 (65.6)

Participants who attributed HIV to spiritual causes had an adherence rate of only 54.5%, compared to 85.6% among those rejecting such beliefs. Cultural interpretations of illness can encourage reliance on traditional healers, prayer camps, or herbal remedies, sometimes at the expense of ART. This finding calls for culturally sensitive health education that respects local traditions while reinforcing biomedical treatment.

4. Discussion

This study examined socio-cultural factors influencing ART adherence among PLHIV in Wassa Amenfi West Municipality, Ghana, and found that stigma, disclosure practices, family and community support, and cultural health beliefs were critical determinants of treatment continuity. The findings reveal that these factors are interlinked and collectively shape the lived experiences of PLHIV in ways that influence adherence behaviour.

Perceived stigma emerged as a substantial barrier to adherence, with individuals reporting high stigma demonstrating markedly lower adherence rates than those with low stigma. This mirrors patterns documented in other Ghanaian and sub-Saharan African studies, where fear of being identified as HIV positive has been shown to discourage clinic attendance and lead to concealment of medication use (Nyblade et al., 2017; Kagaayi et al., 2019). The implications for policy and practice are clear: ART programs must integrate robust stigma-reduction strategies, including community sensitisation, public education campaigns, and visible leadership from people living with HIV who can challenge prevailing misconceptions. Such measures not only improve treatment uptake but also create more supportive social environments for long-term adherence.

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The association between HIV status disclosure and adherence further reinforces the value of social connectedness in sustaining treatment. Participants who disclosed to both family and friends achieved the highest adherence rates, while non-disclosure was associated with the poorest outcomes. Disclosure can open access to emotional reassurance, logistical support, and shared responsibility in medication-taking, which are known facilitators of adherence (Adejumo et al., 2016; Wouters et al., 2014). However, the persistence of non-disclosure among nearly one-fifth of respondents highlights the delicate balance between the benefits of openness and the risks of discrimination. ART programs need to provide safe disclosure counselling that helps patients make informed choices about whom to confide in, while also promoting societal attitudes that reduce the negative consequences of disclosure.

Family and community support were found to significantly enhance adherence, confirming evidence from Kenya and Ethiopia that assistance with transportation, reminders, and financial support can help overcome practical barriers to clinic attendance (Kiplagat et al., 2018; Tiruneh et al., 2019). These findings underline the need for policy approaches that embed ART delivery within community-based support systems. For example, the expansion of peer-led adherence clubs and home-based medication delivery could reduce the logistical burdens faced by rural patients while maintaining social accountability.

Cultural beliefs about the spiritual causation of HIV were also strongly associated with non-adherence, echoing previous research from Malawi and Tanzania that has linked such beliefs with a preference for faith healing or traditional remedies (Moshabela et al., 2017; Audet et al., 2017). While traditional and religious institutions play a central role in many Ghanaian communities, such beliefs can undermine confidence in biomedical treatment. A culturally sensitive policy response would not seek to dismantle these belief systems but rather to engage their leaders as partners in HIV education, ensuring that messages about ART effectiveness are communicated within culturally trusted channels. This approach could help harmonise spiritual beliefs with biomedical adherence, reducing the tendency for patients to abandon treatment in favour of alternative therapies.

The demographic characteristics of the study population—predominantly female and with low educational attainment—also have important implications for intervention design. Women's higher

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representation in care may reflect greater health-seeking behaviour, but it also suggests that men remain less engaged with HIV services, necessitating targeted male outreach initiatives. Low education levels demand that adherence messaging be delivered in accessible formats, such as local-language radio broadcasts, visual aids, and community drama, to ensure comprehension and retention across literacy levels.

Overall, the findings demonstrate that socio-cultural influences on ART adherence are complex and multi-layered, requiring interventions that are not only clinically effective but also socially and culturally attuned. Addressing stigma, enabling safe disclosure, mobilising community support, and constructively engaging with cultural belief systems can strengthen adherence outcomes in rural Ghana, contributing to improved health, reduced HIV transmission, and progress towards national and global treatment targets.

5. Conclusion

This study demonstrates that socio-cultural factors exert a profound influence on ART adherence among people living with HIV in rural Ghana. High levels of perceived stigma, non-disclosure of HIV status, lack of family or community support, and the persistence of beliefs in spiritual causation were all strongly associated with reduced adherence, while supportive social environments and open disclosure enhanced treatment continuity. These findings underscore

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