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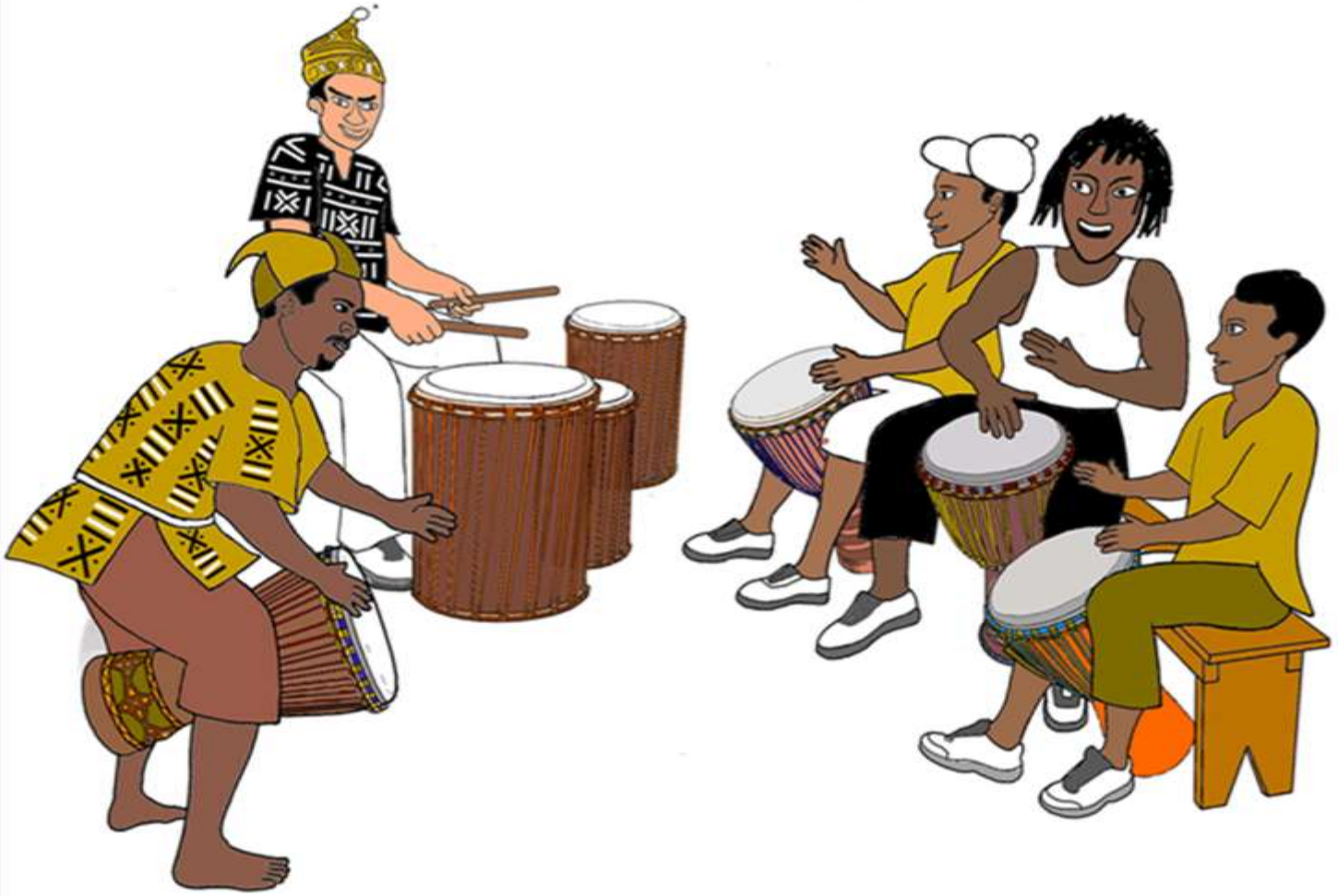

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HIV-Related Alternative Policy Interventions for Addressing Masculinity Norms and Viral Load Suppression among Adolescent Boys on ART in Kenya

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Abstract

Purpose: Whereas alternative policy interventions have been implemented to broaden access to healthcare, little documentation exists regarding how they have influenced viral load suppression among adolescent boys on ART. Adolescent boys aged 14-19 constituted 60% of HIV-related deaths in areas such as Siaya County of Kenya in 2020. This paper sought to investigate how alternative policy interventions for addressing masculinity norms influence VL suppression among adolescent boys on ART in Siaya County, Kenya.

Methodology: This cross-sectional study used questionnaire to collect quantitative data from 263 adolescent boys on ART, as well as Focus group Discussion guide and In-Depth Interviews, alongside seven comprehensive care-in charge (CCC), the County AIDS/HIV and STI Coordinator (CASCO), Sub County AIDS Coordinators (SCACOs), and Public Benefit Organizations (PBO) officials.

Findings: Alternative policy interventions have significant influence (B=0.246, P=0.000).

Unique Contribution to Theory, Practice and Policy: Alternative policy interventions can contribute significant unit changes in VL suppression among adolescent boys. Comprehensive care (CC) clinics, youth-only clinics, and counseling from HIV positive friends (treatment buddies) should be expanded to reach as many patients as possible.

Keywords: *Adolescent Boys on ART; Alternative Policy Interventions; Community-based Clinics; Counseling Services; VMMC; VL Suppression*

Introduction

Implementation of public policies normally fails to achieve expected outcomes due to mismatch between design and capacity of the responsible authorities (Howlett & Ramesh, 2014). Mueller (2020) ascribes this failure to the complex nature of socio-cultural and economic landscapes that cannot be closely controlled or predicted. The normal top–down approach of policy formulation and implementation is predicated on assumptions such as a chronological order in which expressed intentions precede action, a linear causal logic whereby goals determine instruments and instruments determine results, and a hierarchy within which policy formation appear more important than policy implementation (Hill & Hupe, 2015). According to Hudson, Hunter and Peckham (2019), authorities are now beginning to take an interest in ways in which the policy processes, especially the implementation phase, can be strengthened and supported. Alternative policy interventions have therefore been adopted as desirable options for implementing public programs in different locations presenting heterogeneous characteristics (Hudson et al, 2019). Alternative policy interventions are actions taken to address peculiar problems of different interest groups (Hämäläinen, Lahtinen & Virtanen, 2024). While alternative approaches have been implemented for broadening access to healthcare especially in the HIV treatment cascade, a dearth of information exist regarding how the same have addressed masculinity for purposes of achieving viral load suppression among adolescent boys.

Researchers (see Belete, Bitew & Mulatu, 2024; Grund et al, 2023; Odom et al, 2022) have outlined enhanced adherence counseling, differentiated service delivery, community-based testing and treatment, Voluntary Medical Male Circumcision (VMMC), and integrating HIV services with other health programs, among others, as alternative approaches for the achievement of optimum goals of the UN's 95-95-95 targets. However, literature on how these interventions have influenced viral load suppression among adolescent boys on ART is scanty. Arnold et al (2019) assessed the efficacy of an enhanced care program compared to an enhanced stepped care intervention for increasing the viral suppression among HIV infected youths aged 12-24 years in Los Angeles. Retention in care and antiretroviral therapy adherence were some of the secondary outcomes revealed. Another study by Gomillia et al (2020) evaluated the effectiveness of ART initiation programs in community-based clinics in the USA. Rapid ART initiation was found to be effective in decreasing time to viral suppression. Notwithstanding the positive results revealed, Arnold et al (2019) as well as Gomillia et al (2020) have not highlighted how such interventions correlate with viral load suppression among adolescent boys.

Gwyther et al (2019) revealed that Male-targeted interventions were more beneficial for young men than gender-neutral programs in a study that evaluated community and school–based programs relevant to young males aged 12–25 in Australia. Home delivery of ARVs was found to be effective in reaching more eligible clients in a study done in tree countries (Nepal, Indonesia, and Laos) by Hoke et al (2021). However, bot Gwyther et al (2019) and Hoke et al (2021) have not highlighted how these interventions relate with VL suppression among adolescent boys.

In Africa, a number of alternative policy interventions have aimed at preventing HIV infection rather than VL suppression among adolescent boys. For instance, McGillen et al (2018) showed that voluntary medical male circumcision (VMMC) program was effective in averting the widespread of HIV drastically in Zimbabwe. On their part, Matovu et al (2021) showed that most intervention participants would be comfortable giving HIV self-test kits to close male friends and were comfortable receiving HIV self-test kits from their close male friends in Tanzania. Another study done in Uganda by Odom et al (2022) revealed that community-designed and led solutions increased the number of men and children who attained VL suppression in the area. However, Damulak et al (2021), McGillen et al (2018), Matovu et al (2021), as well as Odom et al (2022) have not involved adolescent boys in their studies on one hand, and have not showed how the interventions that they investigated relate with VL suppression.

Interventions aimed at enhancing uptake of HIV treatment cascades in Kenya also appear to overlook adolescent boys. For example, Fayorsey et al (2019), in a study done among six facilities in Siaya County, revealed that in comparison to relative risk, attrition was substantially reduced in the intervention (mother-infant attrition) provided by a lay worker compared to the standard of care (SOC). Treatment buddies (TBy), a person who pledges to help the patient on ART and is typically a trusted friend or family member was also found to increase clinic attendance among both men and women on ART, with women with TBys attending clinics more frequently than males (Kibaara et al, 2016). A recent study that examined how well the VMMC program worked with peer-based interpersonal communication channels to prevent HIV infections in Siaya County by Otteng (2024) revealed that peer education is the most popular interpersonal communication route in the campaign. However, the discussed programs in Fayorsey et al (2019), Kibaara et al (2016), and Otteng (2024) have not highlighted how these interventions relate with VL suppression particularly among adolescent boys. Moreover, the discussed interventions provide the notion that frameworks aiming at remedying impacts of masculinity on VL suppression especially among adolescent boys remain understudied.

In the healthcare discourse, gender and health are closely interrelated since men are often positioned as emotionally repressed (Randell et al, 2016). Masculinity norms that require men to be tough, not to express emotions, and to be risk takers including hyper-sexuality behaviour among others, has been associated with poor health and high rates of morbidity from preventable diseases (Ammann & Staudacher, 2020; Byaruhanga, 2020). Moreover, the social norm that requires men to be the sole breadwinners of the family becomes toxic when it is worsened by lack of economic opportunities and social marginalization (Dery, 2019; Treadwell & Garland, 2011). Researchers (Griffith, 2020; Morrow et al, 2020; O'Donnell & Richardson, 2020) support the involvement of intersectionality theory in the understanding of men's health. Advanced in 1989 by Kimberlé Williams Crenshaw (Crenshaw, 1989), intersectionality promotes the understanding that people's lives are shaped by the interaction between their constructed identities, relationships and social factors which combine to create intersecting forms of privilege and oppression depending on a

person's context and existing power structures such as patriarchy and socio-economic status, among others (Griffith, 2012; Hankivsky, 2014; McCollum et al, 2019). However, whereas adult males may be well equipped (economically and socially) to navigate through such multiple intersections, adolescent boys, while being socialized to follow masculinity norms so as to become men, are worse off due to being ill-equipped in terms of lack of income and social network (Dixon, 2019; Ncube, 2018). Similarly, although high numbers of AIDS related deaths among adolescents have been documented, how alternative policy interventions for addressing these masculinity norms influence viral load suppression of this group has attracted limited research. Such insight is critical especially in areas such as Siaya County were deaths among adolescent boys on ART remain comparatively higher over the years.

According to NASCOP (2022), the body responsible for monitoring HIV and AIDS-related cases including VL status among patients in Kenya, Siaya County was the leading region with high HIV prevalence in the country by end of 2022. NASCOP (2022) statistics show that until 2021 (2015-2021), Siaya County was the leading region in HIV prevalence at 21.1%, followed by Homa Bay (20.7%), Kisumu (16.3%), Migori (13.3 %), Busia (7.7%); Nairobi (6.1%), Vihiga (5.4 %), and Kitui (4.5%). In 2018 alone, 257 adolescents died of HIV-related illness (153 Males; 104 Females) out of 12,253 youths on ART in the area (NASCOP, 2022). This contrasted existing trends in neighbouring counties such as Kisumu (123 deaths: 76 Males; 47 female) or Homa Bay (192 deaths: 111 males; 81 females) among patients on ART. Moreover, studies done in Siaya County over the last decade observe that due to patriarchal nature of the society, seeking for health care among men is considerably counter-normative more so because females usually make up most of the patients and care givers (Dowden et al, 2019). Similarly, earlier sociology scholars in the Luo community where the current study was done such as Ocholla-Ayayo (1976) have documented that Luo male children are normally urged to be *Thuon*, a title given to a brave fighter with exemplary exploits in the battlefield, to inculcate such characteristics in them. Thoun or *Nyathi-majachir* is a brave male child, fearless even in dark nights, and who is able to confront hostile situations (Ocholla-Ayayo, 1976).

The paper aims at establishing the influence of HIV-related alternative policy interventions for addressing masculinity norms and viral load suppression among adolescent boys on ART in Kenya. Specific aims were:

i. To explore the influence of community-based clinics on viral load suppression among adolescent boys on ART in Siaya County, Kenya
ii. To establish the influence of counseling services on viral load suppression among adolescent boys on ART in Siaya County, Kenya
iii. To determine the influence of targeted interventions on viral load suppression among adolescent boys on ART in Siaya County, Kenya

Methodology

Research Design

This study used cross-sectional design with mixed-methods, utilizing both quantitative and qualitative methods of data collection and analysis. This approach was adopted so that quantitative method is used to measure some aspects of the phenomenon under study and qualitative methods for others.

Study population and Sample

The study targeted 795 adolescent boys with high viral load aged 14 – 19 years as contained in NASCOP (2023) records as at December 2022, alongside seven comprehensive care-in charge (CCC), the County AIDS/HIV and STI Coordinator (CASCO), 6 Sub County AIDS Coordinators (SCACOs), and fourteen Public Benefit Organizations (PBO) officials.

This study adopted Yamane's (1967) formula to calculate the sample size of adolescent boys as shown below:

$$n = \frac{N}{1+N(e)2}$$

Where:

n = the sample size,

N = the population size, and

e is the level of precision (0.05).

The calculated sample size for adolescent boys with high viral load on ART was 265. Using stratified proportional technique, the adolescent boys were distributed in each of the six sub-counties based on each administrative unit's population (of the adolescent boys under ART). Similarly, the study purposively selected healthcare practitioners and government officials for interviews and Focus Group Discussions until saturation was attained.

Instrumentation, Validity and Reliability

The study administered structured questionnaires to collect data from the sampled adolescent boys. Similarly, in-depth interviews and Focused Group Discussions (FGDs) guide were also used to gather additional information from randomly selected adolescent boys. In addition, interview schedule as well as FGD guide was also used for gathering information from care-givers as well as government officials in charge of HIV and AIDS treatment in the County.

This study used content validity index (CVI) to enhance the validity of the study instruments. In this regard, ratings of four experts based on item relevance were used to measure constructs of the study variables. The ratings adopted a 4-point ordinal scale of 1 – 4 for not relevant to highly relevant using the formula of Item Content Validity Index (I-CVI) stipulated by Davis (1992):

I-CVI = (agreed item)/ (number of expert)

The calculated rating of the four experts generated a CVI of 0.88. This was considered to be highly relevant by the researchers.

On the other hand, the study used data collected from a pilot study involving 79 adolescent boys on ART who were randomly selected and who were thereafter excluded from the main study to check reliability of the study instrument. With the aid of Statistical Package for the Social Sciences (SPSS) version 21 tool, Split-half method was used to calculate correlation coefficients of 0.86, 0.81 and 0.79 for community-based clinics, counseling services, and targeted interventions respectively.

Data Analysis

Data obtained using questionnaire was analyzed via descriptive and inferential statistics with the aid of SPSS version 25. Similarly, thematic analysis was used to analyze qualitative data obtained from open ended questions in the questionnaire, interviews and Focus Group Discussions.

Ethical Considerations

For ethical considerations, the researchers obtained clearance to conduct the field study from Maseno University Scientific and Ethics Review Committee (MUSERC) and the National Commission for Science, Technology and Innovation (NACOSTI). An assent form was designed and signed by the adolescent boys who were under 18 years old while their parent/guardian signed consent forms.

Results

The researchers were able to process 263 completely filled in out of expected 265 questionnaires from the sampled adolescent boys. Out of this, 23.1% of the boys were 14 years old; 18.9% were 15 years old; 18.6% were 16 years old, and 14.4% were 17 years old. The remaining 25% were aged between 18 and 19 years old. Similarly, 53.8% of them had lost either one parent or both, meaning that they are orphans in one way or the other.

Influence of Alternative Policy Interventions on VL suppression

Efforts to mitigate socio-cultural barriers to uptake of HIV treatment have been documented across different contexts. Such interventions include facility or clinic based, peer based, and population-based masculinity incorporated alternative interventions that aim at attracting men to seek medical services.

Community-based Clinics and VL Suppression

The first alternative intervention analysed was the community-based clinics. To this end, this study requested the sampled adolescent boys to indicate their agreements with statements on community-

based clinics as an intervention aimed at enhancing HIV and AIDS treatment as well as VL suppression endeavors. Table 1 summarizes results of the responses obtained.

Table 1: Community-based Clinics

	N	Yes	No	N/A	M	SD
Community-based Clinics						
CC clinics have served my ART uptake satisfactorily	263	40.7	33.7	25.6	3.07	1.123
CHWs' drug delivery model has improved my ART uptake	263	14.3	42.6	41.1	2.64	1.035
CHWs delivered personal HIV and VL testing kit has improved my uptake of medication greatly	263	4.6	82.1	13.3	1.71	.928
Overall Mean					**2.74**	**1.029**

***Note**: Yes= sum of Strongly Agree + Agree; No= sum of Strongly Disagree+Disagree; N/A=Neither Agree nor Disagree; M=Mean; SD=Standard Deviation*

According to the Table, the respondents neither agreed nor disagreed that community based clinics (M=2.74; SD=1.029) have enhanced their uptake of HIV and AIDS treatment. This finding implies that community based clinics have been beneficial to some patients while to other patients, they have not. Various social factors determining uptake of HIV treatment services offered through various interventions emerged in the qualitative data gathered through IDIs with the adolescent boys as well as KIIs with care providers. In one of the IDIs, a 17-year-old boy stated:

> *Community-based clinics are sometimes populated by nurses who reside in the village and who like to talk a lot. In many instances, many villagers are seeking health services in the same clinic and I prefer not to join them in seeking for the services. I therefore prefer attending a clinic which is situated far away from the community. However, when I am unable to trek and do not have fare for motor bike transport, it forces me to skip medical appointment* (IDI participant).

Similar observation also appeared from the qualitative data collected from KIIs, where it emerged that community-based clinics are beneficial to children and elderly persons, but not for adolescents particularly boys. One female PBO stated:

> *CC clinics or healthcare services offered by CHWs are helpful to a number people at the community level or in the villages. Young children suffering from malaria or diarrhea as well as old people with terminal illness are easily reached by services from these clinics and CHVs, However, many adolescents particularly boys prefer their health issues to be handled far away from their villages or by people who do not know much about their background. This is because majority of CHWs are females and come from the same community or village where they live in, making them to have fear of HIV disclosure (female KII interviewee).*

The statement attributed to the female interviewee appear to illustrate that the initiatives put in place to make HIV treatment accessible to adolescent boys are influencing their uptake of the services. These results suggest that there are social issues that act as barriers to the uptake of these interventions in some patients, while in other patients, there could be existing facilitators.

Counseling Services and VL Suppression

The study also analysed counseling services and how it influences uptake of HIV treatment as well as VL suppression. The study therefore requested the sampled adolescent boys to indicate their agreements with statements on counseling services as an intervention aimed at enhancing HIV and AIDS treatment as well as VL suppression endeavors. Table 2 summarizes results of the responses obtained.

Table 2: Counseling Services and VL Suppression

Counseling Services	N	Yes	No	N/A	M	SD
Counseling from HIV positive friends (Buddies) has greatly improved my uptake of medication	263	58.9	17.9	23.2	3.51	1.015
Counseling from CHWs has satisfactorily helped me since my ART initiation	263	57.4	18.3	24.3	3.40	.943
Counseling from CBOs/CSOs have satisfactorily helped me since my ART initiation	263	23.2	38.8	38	2.66	1.103
Overall Mean					**3.19**	**1.020**

***Note**: Yes= sum of Strongly Agree + Agree; No= sum of Strongly Disagree + Disagree; N/A=Neither Agree nor Disagree; M=Mean; SD=Standard Deviation*

Findings in Table 2 illustrate that the respondents neither agreed nor disagreed that counseling services (M=3.19; SD=1.020) have enhanced their uptake of HIV and AIDS treatment. This finding implies that counseling services have been beneficial to some patients while to others, they have not. Specifically, counseling from HIV positive friends (Buddies) (n=58.9%; M=3.51) is indicated to have greatly improved uptake of medication among the adolescent boys.

During FGDs with some PBO officials, it emerged that peer support emanating from attending same clinic has helped a number adolescent to honour medical appointments for treatment and even testing. One male PBO officials said that:

> *Peer support has been one of the social factors that has enabled many public benefit organizations extending HIV treatment services to patients to roll out a number of interventions in the area. Most of the patients especially adolescent boys would rather share and accept information related to treatment intervention from a sick colleague with whom they attend same clinic rather than from a stranger such as a relative or even a health worker. For instance, majority of the boys who have accepted VMMC were convinced by their colleagues who shared with them the benefits of this intervention to their satisfaction (PBO official FGD participant).*

An important approach that appears to enable successful implementation of HIV-related interventions despite barriers associated with cultural practices in the study area is peer communication.

Targeted Interventions and VL Suppression

Population specific interventions were also analysed with regards to their effectiveness in influencing uptake of HIV treatment services by adolescent boys in the study area. In this regard, the adolescent boys who participated in this study were therefore requested to indicate their agreements with statements on some of the targeted interventions aimed at enhancing HIV and AIDS treatment as well as VL suppression endeavors. Table 3 summarizes results of the responses obtained.

Table 3: Targeted Interventions

Targeted Interventions	N	Yes	No	N/A	M	SD
Acceptance of VMMC has significantly reduced other opportunistic diseases most since my ART initiation	263	85.5	7.7	6.8	4.21	.961
Youth-only clinics have greatly improved our attendance to medical appointments	263	69.2	9.5	21.3	3.63	.822
VL tests and Drugs delivered through youth clubs have improved our attendance to medical appointments	263	6.5	73.7	19.8	1.92	.997
Overall Mean					**3.25**	**0.927**

***Note**: Yes= sum of Strongly Agree + Agree; No= sum of Strongly Disagree+ Disagree; N/A=Neither Agree nor Disagree; M=Mean; SD=Standard Deviation*

Findings in Table 3 illustrate that the sampled respondents neither agreed nor disagreed that targeted interventions (M=3.25; SD=0.927) have enhanced their uptake of HIV and AIDS treatment. This finding implies that population based targeted interventions have been beneficial to some patients while to other patients, they have not. It is also illustrates that 85.5% of the adolescent boys agreed that acceptance of VMMC has significantly helped in reducing other opportunistic diseases since they were initiated into ART (M=4.21; SD=.961). Similarly, 69.2% of the boys agreed that youth-only clinics have greatly improved their attendance to medical appointments (M=3.63; SD=.822). These findings suggest that acceptance of VMMC, youth-only clinics, and counseling from HIV positive friends (Buddies) have enhanced their HIV treatment efforts.

These results were also supported by qualitative data from interviews held with some comprehensive care-in charge (CCC), where scheduling specific days for youth-only clinics was described to be successfully in encouraging many adolescent boys to access HIV treatment services. A female CCC in one of health facilities stated that:

> *Most adolescents prefer seeking HIV treatments services such as VL testing and collection of ART at clinics secluded for them or youth-only clinics. They feel very free in*

such environments. In a number of occasions, the boys would even make efforts to enquire the whereabouts of a 'colleague' or one of them who has failed to attend a medical appointment on the day of their clinic. Being attendees of such clinics make them become buddies, and many of them would go an extra mile of accompanying one of them to the facility for an appointment even when it is not his day to go for treatment (female KII interviewee).

During FGDs with some PBO officials, it emerged that peer support emanating from attending same youth-only clinic has helped a number adolescent to accept some of the intervention designed for combating the pandemic such as VMMC, despite resistance of cultural to the practice in the area. One male PBO officials said that:

Peer support has been one of the social factors that has enabled many public benefit organizations extending HIV treatment services to patients to roll out a number of interventions in the area. Most of the patients especially adolescent boys would rather share and accept information related to treatment intervention from a sick colleague with whom they attend shame clinic rather than from a stranger such as a relative or even a health worker. For instance, majority of the boys who have accepted VMMC were convinced by their colleagues who shared with them the benefits of this intervention to their satisfaction (PBO official FGD participant).

Influence of Alternative Policy Interventions on VL Suppression

The study also analysed the extent to which the investigated alternative policy interventions have influenced VL suppression among the adolescent boys. In this regard, the sampled respondents were asked to express their agreement as Strongly Disagree; Disagree; Moderately Agree; Agree; and Strongly Agree. Table 4 presents the summarized results of the respondents' level of agreement.

Table 4: Influence of Alternative Policy Interventions on VL Suppression

Level Agreement	Frequency	Percent	Mean	SD
Strongly Disagree	22	8.4		
Disagree	19	7.2		
Neither Agree nor Disagree	94	35.7	3.10	1.205
Agree	51	19.4		
Strongly Agree	77	29.3		
Total	**263**	**100**		

The results presented in Table 4 indicate that the respondents neither agreed nor disagree (M=3.10; SD=1.205) that alternative policy interventions have influenced VL suppression among adolescent boys. While 48.7% of them agreed that the interventions have influenced VL suppression, 35.7% neither agreed nor disagreed and 15.6% disagreed. This suggests that 51.3% of the primary

respondents in this study only partially agree that the discussed alternative policy interventions influence VL suppression among the adolescent boys on ART in this area.

Further analysis was conducted to determine the magnitude of the influence that the alternative policy interventions as on VL suppression through regression analysis. Table 5 presents the results.

Table 5: Regression Analysis for Alternative Policy Interventions and VL Suppression

Model	R	R Square	Adjusted R Square	Std Error of the Estimate	Change Statistics			
					R Square Change	F Change	df 1	df 2	Sig F Change
1	.521 [a]	.272	.263	.538	.272	32.220	3	259	.000

a. Predictors: (Constant), Community-based clinics, Counseling services, Targeted interventions

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.170	.286		11.075	.000
	Alternative policy interventions	.246	.064	.209	3.853	.000

a. Dependent Variable: VL suppression

In Table 5, the unstandardized beta for alternative policy interventions is 0.246, with a p value of 0.000. This implies that alternative policy interventions can contribute 0.721 unit changes in VL suppression among the boys. The changes are significant in influencing VL suppression. With R^2 of .272, it can be deduced that 27.2% change in VL suppression among adolescent boys on ART in Siaya County is attributed to alternative policy interventions under this study. The remaining 72.8% of change in VL suppression among the adolescent boys on ART may be attributable to other factors beyond this study

During interviews with THE Sub County AIDS Coordinators (SCACOs), emerged that various social factors including lack of adequate social support often act as barriers to the uptake of HIV medication services offered through various interventions. One male SCACO explained that:

> *Most of the interventions for combating HIV pandemic and enhancing VL suppression have been beneficial to the adolescent boys. A number of boys have accepted these interventions such as HIV medication services through youth only clinics, honouring appointments accompanied by buddies, acceptance of VMMC, and counseling services as well as drugs delivered by CHWs among others. However, the adolescents, being at a critical age when a lot of exploration and discoveries shape their beliefs, need to be supported adequately for these interventions be meaningful to them. More so, for these*

interventions to be beneficial to adolescents, they need social as well as economic support from the family, society, and even the health facilities (SCACO KII interviewee)

Support to the adolescent boys comes out from the statement from the SCACO as an essential issue that needs to be provided in order for interventions incorporated with masculinity factors to be able to enhance VL suppression among this population.

Discussions

Te discussion was based on results obtained from analyses for the three objectives: community-based clinics, counseling services, and targeted interventions.

Community-based Clinics and VL Suppression

The study reveals that community based clinics have been beneficial to some patients while to other patients, they have not. It appears that there exist different social issues that interact to shape uptake of HIV treatment services especially those offered through established facilities as well as various interventions. Viewed under the lenses of intersectionality theory (Mburu et al, 2014; Monteiro et al, 2013) the intersection axes of seeking health care and accepting a 'sick role' and safeguarding their reputation as well as respectability on one hand, and disclosing their HIV status on the other hand, deter the boys from accessing healthcare services from community-based clinics in the area.

The revelation of existence of diverse social issues that shape uptake of HIV treatment services including alternative interventions concurs with the results of some studies done in the same context. For instance, Adino (2020) revealed that the availability of social and financial support is significant determinants of the uptake of HIV-related interventions in Siaya County. Another study by Ibworo and Ibworo (2021) patient's characteristics that influence provider Initiated HIV Testing and Counseling (PITC) service uptake in Siaya County showed that patients with higher education levels are likely to uptake PITC than those with lower education. An earlier study by Burton et al (2011) also showed that households with high socio-economic status were more likely to access available HIV interventions including masculinity factors incorporated policy interventions in Bondo Sub County of Siaya County. Another determinant of uptake of HIV-related interventions highlighted in previous studies is enactment of social norms and belief systems. In a study done in Awelo estate of Siaya County, Dowden et al (2019) revealed that patriarchal nature of the society view seeking for health care services among men as counter-normative. Community-based clinics therefore benefit the adolescent boys on ART differently, based on socio demographic characteristics of the patients.

Counseling Services and VL Suppression

The study findings reveal that counseling services have been beneficial to some patients while to others, they have not. It was specifically been revealed that counseling from HIV positive friends

(Buddies) has greatly improved uptake of medication among the adolescent boys. Referred to by researchers as treatment buddies (TBy), a person who pledges to help the patient on ART and is typically a trusted friend or family member, a similar study by Kibaara et al (2016) also found to counseling from such entities increase clinic attendance among both men and women on ART. However, women counseled by TBys tend to attend clinics more frequently than males (Kibaara et al, 2016). A recent study that examined how well the VMMC program worked with peer-based interpersonal communication channels to prevent HIV infections in Siaya County by Otteng (2024) also revealed that peer counseling is the most popular interpersonal communication route in the campaign. Indeed, past studies such as Messias et al (2006) have succinctly described peer counseling as affording better opportunities to counselors to understand and assess clients' physical, emotional, and environmental status and allow them to connect with peers in more concrete and personal ways.

Targeted Interventions and VL Suppression

One approach that appears to enable successful implementation of HIV-related interventions despite barriers associated with cultural practices in the study area is peer communication. Indeed, a number of studies have highlighted the significance of peer support in the uptake of HIV treatment requirements. In a study that assessed the role of interpersonal communication on VMMC uptake among men, Odwa (2018) revealed that the approach has helped in changing the attitude of men towards the procedure, hence enabling them to avail themselves for the procedure at various facilities in the area. Another recent study by Otteng (2024) also established that show that peer education is the most used interpersonal communication channel in VMMC campaign, with varied degrees of application and efficiency among men in Siaya County. Treatment buddies, trusted family members or friend who commit to support the patient on ART or on clinic attendance in men, were also found to be effective in improving medical appointment honouring in a study done among four facilities in western Kenya by Kibaara et al (2016). These interventions have also been documented to be effective in the management of HIV in different contexts. For instance, McGillen et al (2018) established that VMMC program is effective in controlling the spread of HIV in Zimbabwe. In Tanzania, Matovu et al (2021) revealed that HIV self-test kits distributed by close male friends were more acceptable to patients than those from strangers.

Conclusion

This research concludes that the studied alternative policy interventions have influenced VL suppression among some boys while they have not done so in others. Specifically, the study concludes that community based clinics, counseling services, and targeted interventions have enhanced uptake of HIV treatment (ART and VL test uptake) differently among the boys: they have helped some boys while others have not benefited. The study also concludes that voluntary male medical circumcision (VMMC), comprehensive care (CC) clinics, youth-only clinics, and

counseling from HIV positive friends (*treatment buddies*) are effective in enhancing VL suppression efforts.

The study further concludes that personal HIV and VL testing kits delivered by community health workers (CHWs) and drugs delivered through youth clubs are not effective in influencing VL suppression efforts among the boys. The study however concludes that alternative policy interventions have the potential to cause significant unit improvements on VL suppression among the primary participants of the study.

Recommendations

This research recommends that community based clinics, counseling services, and targeted interventions should be tailored to individual needs of patients, especially social needs of individual adolescent boys, and not to be generalized. The study further recommends that more effort should be put in escalating VMMC especially through school systems; targeting adolescents aged 14-15. This study also recommends that comprehensive care (CC) clinics, youth-only clinics, and counseling from HIV positive friends (*treatment buddies*) should be expanded to reach as many patients as possible, and they should also specifically be targeted at adolescent boys.

Additionally, the study recommends that personal HIV and VL testing kits should be delivered through means or structures that are acceptable to adolescent boys such as HIV positive friends (*treatment buddies*), for example. In this vein, more HIV positive friends (*treatment buddies*) should be trained on and be enabled to take part in intervention programs for HIV and AIDS treatment.

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