Global Journal of Health and Innovation Burundi
Vol. 2 No. 12 (2025): December 2025 Issue
https://doi.org/10.70659/gjhib.v2i12.80
Original Article

THE RELATIONSHIP BETWEEN HIV COUNSELLING AND TESTING (HCT) SERVICES, AND HIV PREVALENCE IN JUBA, CENTRAL EQUATORIA STATE, A CROSS-SECTIONAL STUDY.

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Abstract
Background
The escalating prevalence of HIV/AIDS in Juba, Central Equatoria State, necessitates effective and multifaceted prevention strategies. This study determined the relationship between HIV counselling and testing (HCT) services and HIV prevalence in Juba, Central Equatoria State.

Methodology
A cross-sectional study design was employed, utilizing both qualitative and quantitative research methods. Data were collected through surveys and interviews with 142 participants, including healthcare providers and residents of Juba. Statistical analyses were conducted using regression models and correlation matrices to evaluate the impact of the HIV prevention strategies. The study was conducted in Juba, the largest city and capital of Central Equatorial State, South Sudan, an area with diverse demographics and significant HIV/AIDS challenges.

Results
Participants predominantly had secondary education 56(39%) and 40(28%) of the participants were traders, 90.9% of respondents agreed that it is very important for anyone to go for HIV Counselling & Testing, 83.3% of respondents agreed that counselling schedules in health centers are known, 90.1% of respondents agreed that counselling and testing (HCT) is increasing access to treatment (ART inclusive) and care in their community and 58.3% of respondent agreed that counsellors/counselling assistants are available all the time, 72% of the respondents agreed that people in Juba receive HIV test results from their counselor without waiting for too long.

Conclusion
HCT was a very significant predictor affecting HIV/AIDS prevalence in Juba, and under the HCT dimension, it was noted that several factors were affecting HIV/AIDS prevalence in Juba.

Recommendations
CAP-AIDS Juba, in its research, has approved that a Participatory Radio Campaign Model has a great impact not only on upscaling HCT but also on male participation.

Keywords: *HIV counselling and testing (HCT) services, HIV prevalence, Juba.*
Submitted: June 12, 2025 Accepted: August 22, 2025 Published: December 30, 2025

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Background
The HIV epidemic remains a pressing public health issue in Juba, Central Equatoria State, South Sudan. Current data reveal that the prevalence rate of HIV in this region stands at approximately 4.1%, which is significantly higher than the national average of 2.7% (Jervase et al., 2018). This elevated rate indicates that a substantial segment of the population in Juba is affected, with an estimated 30,000 individuals living with HIV in the city alone (Nweze et al., 2017). The persistence of such high prevalence rates underscores the ongoing challenge that the health systems and communities face in curbing the spread of this life-threatening virus. (Fernández et al., 2021) demonstrated that effective communication channels—both formal and informal—significantly enhanced the uptake of HCT services. The study indicated that when community leaders and healthcare providers actively promoted HCT services, the community's acceptance and participation rates increased substantially. The relevance of the Diffusion of Innovations Theory to this study lies in its ability to frame the introduction and spread of HCT services within Juba as a complex sociocultural process. By understanding the key elements that influence the adoption of these services, the study can identify effective strategies to enhance their uptake and, consequently, reduce HIV prevalence. This theoretical approach supports the development of tailored interventions that consider the specific needs, communication preferences, and social structures of the Juba community.

The impact of HIV in Juba is profound, affecting individuals, families, and the broader community. For individuals, the virus leads to deteriorating health, reduced quality of life, and increased medical costs, while also contributing to the stigma and discrimination that exacerbate social isolation(Kharsany & Karim, 2016). On a community level, the epidemic strains healthcare resources, as the demand for medical care, especially for antiretroviral therapy, significantly outweighs the available supply. Health service providers are often overwhelmed, facing shortages of staff and supplies, which hampers their ability to deliver effective care (Filip et al., 2022).

Several factors contribute to the high prevalence of HIV in Juba. Key among these are the high rates of urban migration, which bring diverse populations together and increase the risk of HIV transmission. Additionally, there is a notable lack of effective educational programs tailored to the local context, resulting in poor awareness and misconceptions about the disease (Selod & Shilpi, 2021). Cultural practices and gender norms also play a critical role, with women being particularly vulnerable due to socio-economic dependency and limited bargaining power in sexual relationships(Nartey et al., 2023).

Efforts to address the HIV crisis in Juba have included the implementation of various health interventions, such as the establishment of voluntary counselling and testing centers, distribution of condoms, and provision of antiretroviral treatment. Despite these initiatives, significant gaps remain. Studies have highlighted that many programs fail to effectively reach the most at-risk populations, and there is a lack of sustained funding to support the interventions (Goorts et al., 2021). Moreover, there is a need for more comprehensive data to better understand the specific drivers of the epidemic in this region and to develop interventions that are culturally appropriate and geographically specific. The persistence of high HIV prevalence rates in Juba, despite ongoing health interventions, highlights a critical gap in the current response strategies. There is a pressing need for a renewed focus on tailored, sustainable solutions that address both the biomedical and socio-cultural dimensions of HIV prevention and care. This study aims to fill these gaps by evaluating existing prevention initiatives and identifying the underlying factors contributing to the high prevalence rates. This study aimed at determining the relationship between HIV counselling and testing (HCT) services and HIV prevalence in Juba, Central Equatoria State.

Methodology

Research Design

The research design adopted for this study was a mixed-method approach, integrating both quantitative and qualitative research methodologies to provide a comprehensive analysis of the phenomena under study. This design facilitated an extensive assessment of both the measurable outcomes of HIV preventive initiatives and the qualitative experiences of individuals and communities affected by these programs. The quantitative aspect employed descriptive and inferential statistics to examine the relationships and impacts quantitatively. Conversely, the qualitative component utilized thematic analysis to delve into the contextual and experiential factors influencing these relationships, thus providing a deeper understanding of the underlying mechanisms and effects.

Research Approach

The research approach was structured to be both exploratory and explanatory, aiming to uncover and clarify the dynamics between HIV preventive measures and their effectiveness in reducing prevalence rates. Initially, the exploratory facet helped in identifying significant patterns and trends within the collected data, guiding the subsequent explanatory investigation that sought to establish causal relationships and deduce the implications of the findings. This approach was instrumental in addressing the multifaceted nature of HIV prevention, which involves complex interactions between various stakeholders and elements within the healthcare system.

Study Population

The study population comprised residents of Juba County, specifically targeting individuals directly affected by HIV, healthcare providers, and members of local non-governmental organizations involved in HIV preventive efforts. This population was chosen due to their firsthand experience and involvement in HIV prevention initiatives, making them crucial sources of both quantitative data and qualitative insights.

Sample Size Selection

To ensure statistical significance and manageability, the sample size was calculated using the formula n=N1+N(e2) n=1+N(e2) N, where NN is the population size and ee is the margin of error (presumed at 5%). Assuming an estimated population size of 1000 participants potentially available for the study, the sample size calculated was approximately 87 participants. This size was deemed sufficient to achieve a balance between statistical power and practical feasibility in data collection.

Sampling Techniques

The sampling technique utilized was stratified random sampling, which involved dividing the entire population into different strata based on specific criteria such as age, gender, and role in HIV prevention. From each stratum, participants were randomly selected to ensure a representative sample that could adequately reflect the diverse perspectives and experiences within the community. This method not only enhanced the generalizability of the findings but also ensured that all sub-groups within the population were fairly represented in the study.

Sources of Data

Data for the study were collected from both primary and secondary sources to enrich the research outcomes. Primary data was obtained directly from the field through surveys, interviews, and direct observations, providing real-time, firsthand information from participants. Secondary data was gathered from existing records, academic journals, and reports from reputable organizations such as the World Health Organization and local health ministries. This dual-source approach was instrumental in validating the data collected and offering a comprehensive view of the subject matter.

Data Collection Tools/Instruments.

Various tools were employed to collect data, including structured questionnaires for quantitative data and semi-structured interviews for qualitative insights. Additionally, focus group discussions were conducted to facilitate an interactive sharing of views and experiences among participants, enhancing the depth of information obtained.

Research Procedure

The data collection procedure was rigorously structured, beginning with a pilot study to test the effectiveness and clarity of the data collection instruments. Following refinements from the pilot feedback, the main data collection phase was executed, adhering strictly to the ethical guidelines established for the study. Participants were informed of the study's purpose, their role in it, and their rights, with all participants providing informed consent before participating.

Measurement of Variables

The measurement of variables was carefully planned to align with the study's objective. The independent variable was gauged based on accessibility, utilization rate, and follow-up procedures for HCT services. Dependent variables included HIV prevalence rates, the incidence of new HIV infections, the rate of mother-to-child transmission, and community health outcomes. These measurements were quantified using scales and indexes developed through the study's preliminary research phase.

Validity and Reliability of Research Instruments

The validity and reliability of the research instruments were thoroughly tested through a combination of pilot testing, peer review, and iterative feedback adjustments. The instruments were designed to ensure construct validity by accurately measuring the theoretical constructs they intended to measure. Reliability was ensured through test-retest methods, ensuring that the instruments were consistent and dependable over time.

Data Process and Analysis

Data processing involved meticulous data entry, coding, and cleaning before analysis. Quantitative data analysis was performed using statistical software IBM SPSS version 25, which facilitated the computation of descriptive and inferential statistics, including regression analysis and correlation coefficients. Qualitative data from interviews and focus groups were analyzed using NVIVO software, which supported thematic analysis to identify recurring patterns and themes within the data.

Results

Demographic Data

The study on HIV preventive initiatives and prevalence rates in Central Equatoria State, South Sudan, incorporated a demographic analysis to understand the background of the participants. This section provides insight into various personal attributes such as gender, age, religion, marital status, education level, occupation, and the duration of living with HIV or awareness of HIV status. The results from this analysis are critical for interpreting the impact of demographic factors on the effectiveness and reception of HIV preventive measures.

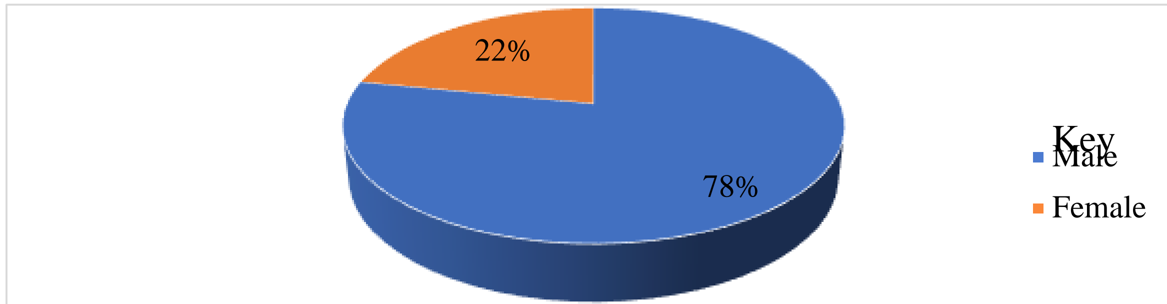
Gender

Table 1: Gender Distribution of Participants

Gender	Frequency	Percentage (%)
Male	111	78
Female	31	22
Total	**142**	**100**

Source: Survey data (2024)

Figure 1: Gender Distribution of Respondents.



The gender disparity is evident, with a significantly higher number of male participants (78%) compared to female participants (22%). This finding indicates a possible gender bias in accessibility or willingness to participate in HIV-related studies and initiatives. The underrepresentation of females might impact the effectiveness of the preventive measures, as women often face unique challenges in health access and education, which are critical in the fight against HIV.

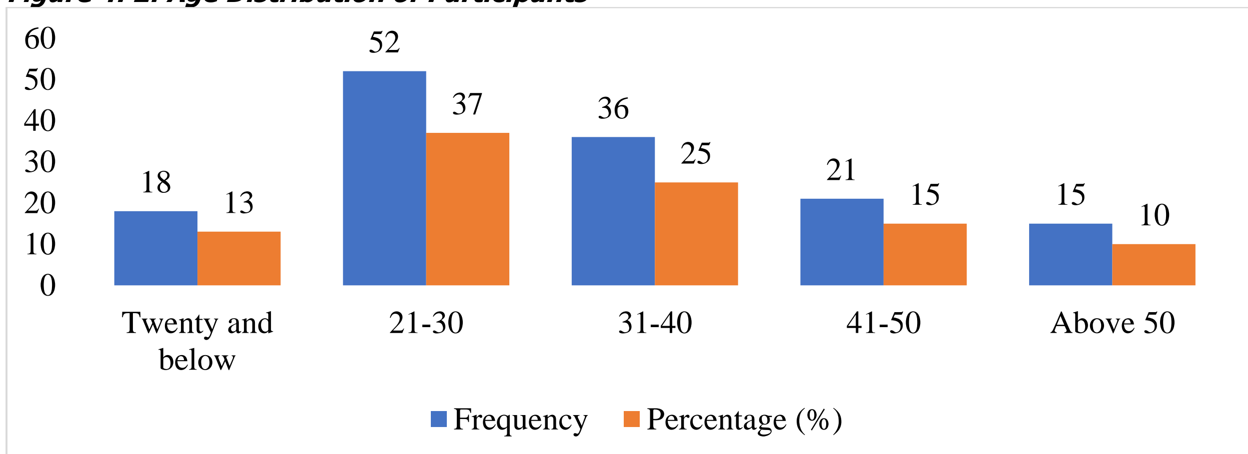
Age

Table 2: Age Distribution of Participants

Age Group	Frequency	Percentage (%)
Twenty and below	18	13
21-30	52	37
31-40	36	25
41-50	21	15
Above 50	15	10
Total	**142**	**100**

Source: Survey data (2024)

Figure 4. 2: Age Distribution of Participants



The majority of participants fall within the 21-30 age group, making up 37% of the sample. This age group is notably significant in the context of HIV as it typically represents a highly active demographic in terms of mobility and sexual activity, potentially increasing risk exposure to HIV. The data shows lesser participation from the older age groups,

Global Journal of Health and Innovation Burundi
Vol. 2 No. 12 (2025): December 2025 Issue
https://doi.org/10.70659/gjhib.v2i12.80
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especially those above 50, who account for only 10% of the sample.

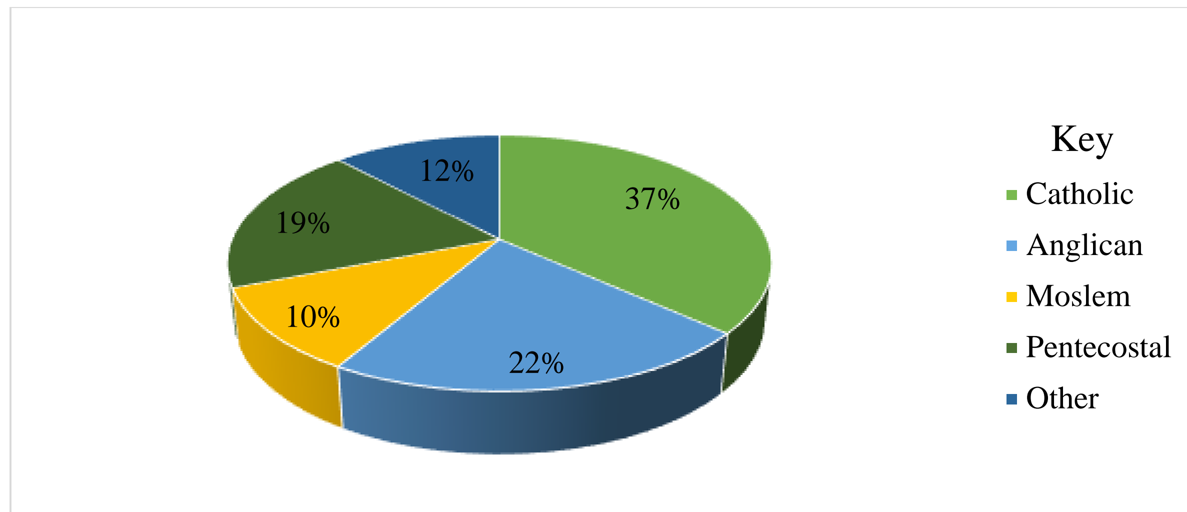
Religion

Table 3: Distribution of Participants by Religion

Religion	Frequency	Percentage (%)
Catholic	52	37
Anglican	31	22
Moslem	15	11
Pentecostal	27	19
Other	17	12
Total	**142**	**100**

Source: Survey data (2024)

Figure 3: Distribution of Participants by Religion



The majority of the participants identified as Catholic (37%), followed by Anglican (22%) and Pentecostal (19%). This reflects the religious landscape in Central Equatoria State, where these denominations hold significant influence.

The participation of individuals from the Muslim community, though lower (11%), is crucial as it represents a different cultural and religious perspective within the area.

Marital Status

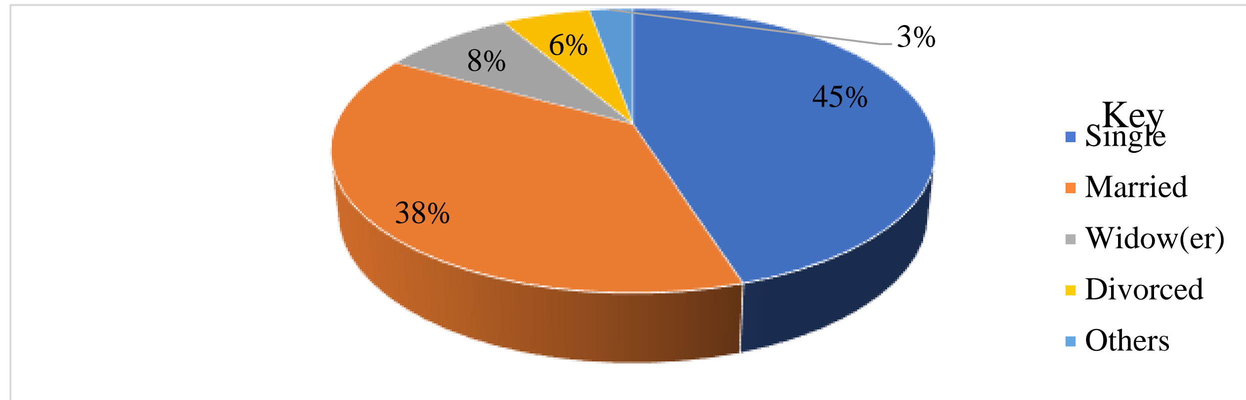
Table 4: Distribution of Participants by Marital Status

Marital Status	Frequency	Percentage (%)
Single	64	45
Married	54	38
Widow(er)	12	8
Divorced	8	6
Others	4	3

Total	**142**	**100**

Source: Survey data (2024)

Figure 4: Distribution of Participants by Marital Status



The results show a higher frequency of singles (45%) and married individuals (38%) within the study sample. Singles, often younger, may have different exposure levels and attitudes towards HIV compared to their married counterparts, who may have more stable sexual behaviors but also different prevention needs, such as couple counseling and testing. The presence of widowed and divorced individuals, though smaller, highlights groups that might be particularly vulnerable due to social and economic factors influencing their health-seeking behaviors.

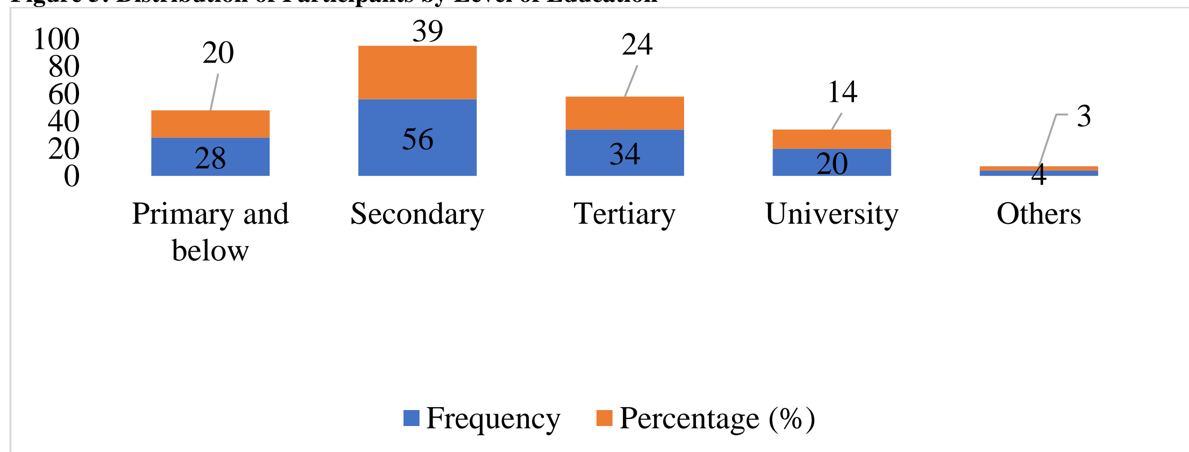
Level of Education

Table 5: Distribution of Participants by Level of Education

Level of Education	**Frequency**	**Percentage (%)**
Primary and below	28	20
Secondary	56	39
Tertiary	34	24
University	20	14
Others	4	3
Total	**142**	**100**

Source: Survey data (2024)

Figure 5: Distribution of Participants by Level of Education



Participants predominantly had secondary education 56(39%), followed by those with tertiary (24%) and primary or below (20%) levels of education. The presence of participants with university education (14%) and a small number categorized under 'Others' (3%) provides a broad spectrum of educational backgrounds, enriching the understanding of how educational attainment impacts health behaviors.

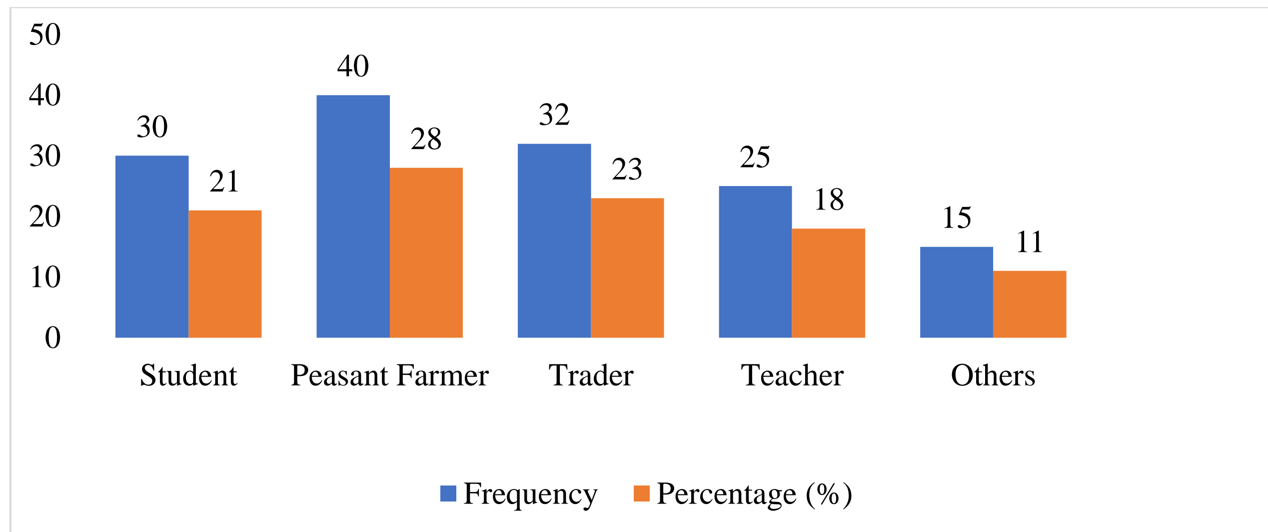
Occupation

Table 6: Distribution of Participants by Occupation

Occupation	Frequency	Percentage (%)
Student	30	21
Peasant Farmer	40	28
Trader	32	23
Teacher	25	18
Others	15	11
Total	**142**	**100**

Source: Survey data (2024)

Figure 6: Distribution of Participants by Occupation



The occupational distribution indicates a significant representation of peasant farmers 40(28%) and traders (23%), followed by students (21%) and teachers (18%). The category 'Others' comprises 11% of the participants, reflecting a variety of less common professions within the community. This diverse occupational background suggests varying levels of exposure and access to HIV information and services.

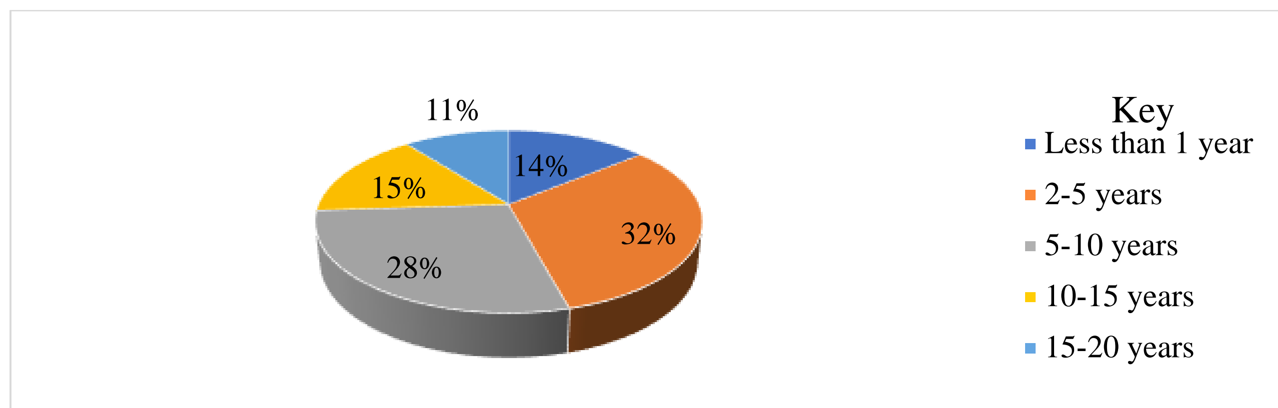
Number of Years Lived with HIV or Known HIV Status.

Table 7: Distribution of Participants by Years Known HIV Status

Years Known HIV Status	Frequency	Percentage (%)
Less than 1 year	20	14
2-5 years	45	32
5-10 years	40	28
10-15 years	22	15
15-20 years	15	11
Total	**142**	**100**

Source: Survey data (2024).

Figure 7: Distribution of Participants by Years Known HIV Status



This distribution highlights that a significant portion of the participants (32%) have known their HIV status for 2-5 years, followed closely by those who have been aware for 5-10 years (28%). These figures suggest ongoing engagement with healthcare services and possible stability in managing their health condition. Those who have known their status for less than a year represent a newer group, possibly indicating recent diagnoses and the ongoing effectiveness of HIV testing campaigns.

The Descriptive Analysis of Respondents views on HCT and HIV/AIDS prevalence in Juba.

Table 8: Respondents' Views on HCT and HIV/AIDS Prevalence.

HIV Counseling and Testing	Mean	Std Dev (σ)	PERCENTAGE RESPONSES				
			SD (1)	D (2)	N (3)	A (4)	SA (5)
It is important to test HIV Counseling & Testing.	**4.00**	**.303**	0% (0)	0% (0)	4.5% (6)	90.9% (120)	4.5% (6)
Counseling & testing services are available and done in the health centers within Juba.	**4.00**	**.371**	0% (0)	2.3% (3)	0% (0)	93.2% (123)	4.5% (6)
Counseling schedules in health centers are known.	**3.76**	**.722**	0% (0)	13.6% (18)	0% (0)	83.3% (110)	3% (4)
Counselors/Counseling assistants are available all the time.	**3.23**	**1.010**	0% (0)	39.4% (52)	0% (0)	58.3% (77)	2.3% (3)

There are private places for counseling within the health centres.	**3.47**	**.912**	0% (0)	27.3% (36)	0% (0)	71.2% (94)	1.5% (2)
I have tested for HIV from a health centre in Juba.	**3.73**	**.721**	0% (0)	14.4% (19)	0% (0)	84.1% (111)	1.5% (2)
Pre-test counseling is available in health centers within Juba.	**3.83**	**.595**	0% (0)	9.1% (12)	0% (0)	89.4% (118)	1.5% (2)
I was counseled after being tested for HIV virus (post-test counseling).	**4.02**	**.261**	0% (0)	0% (0)	2.3% (3)	93.2% (123)	4.5% (6)
I received my HIV test results from my counselor without waiting for too long.	**3.64**	**.892**	0% (0)	21.2% (28)	0% (0)	72% (95)	6.8% (9)
I understood my results through the explanation of the counselor.	**3.91**	**.671**	0% (0)	2.3% (3)	0% (0)	81.8% (108)	4.5% (6)
I continue to receive counseling from nearby health centres these days.	**4.00**	**.371**	0% (0)	2.3% (3)	0% (0)	93.2% (123)	4.5% (6)
Knowing my status has made me to start practicing & continue with faithfulness to my partner (avoiding extramarital sex)	**3.95**	**.640**	2.3% (3)	3% (4)	0% (0)	86.4% (114)	86.4% (114)
Since I tested HIV/AIDS positive, I have continued to have various sexual relationship.	**2.24**	**.655**	0% (0)	87.9% (116)	0% (0)	12.1% (16)	0% (0)
HCT is increasing access to treatment (ART inclusive) and care in our community.	**3.78**	**.680**	2.3% (3)	7.6% (10)	0% (0)	90.2% (119)	0% (0)
The majority of people in my community go for HIV counseling and testing.	**3.61**	**.798**	0% (0)	20% (26)	0% (0)	80% (106)	0% (0)

In the table above, respondents' views on all the indicators used to measure the effect of HCT on HIV/AIDS prevalence in Juba and the percentage response rates have been presented. On the importance of HCT, 90.9% of respondents agreed that it is very important for anyone to go for HIV Counselling & Testing, and only 4.5% of the respondents were undecided. Therefore, community members in Juba acknowledge that there is a high level of importance for anyone to go for HIV Counselling & Testing. When respondents' opinions were sought on whether counselling & testing services were available and done in the health centers within Juba, 93.2% of respondents agreed with the opinion, and only 2.3% of respondents disagreed with the above. This, therefore, means that Counselling & testing services are available and done in the health centers in the district. Having schedules for counselling is very important and must be known by everyone who wants to seek the service, as failure to know the schedules could lead to a lack of or even no access to counselling services at all. When asked about the above, 83.3% of respondents agreed that counselling schedules in health centers are known, while 13.6% disagreed with the statement that counselling schedules in health centers are known. This therefore suggests that there is a high level of knowledge on counselling schedules in health centers, thus supporting HIV counselling and testing services. Observation further confirmed this when the researcher went to some of the health centers in Juba, as five out of the seven health centers visited had information on testing dates and other information related to HIV/AIDS clearly written and pinned on the notice boards and most of the walls within the health centers. Findings revealed that counsellors/counselling assistants are available in health centers all the time, as 58.3% of respondents agreed that counsellors/counselling assistants are available all the time, and only 39.4% disagreed with the above. Counselling can only be done efficiently and effectively if carried out at private places that permit openness, so the researcher found it important to know if there were private places for counselling people in health centers within Juba. Of the 142 respondents, 71.2% agreed that there are private places for counselling within the health centers, and 27.3 % of respondents disagreed with the above statement. Observation further showed that although there are counselling places in most of the health centers visited, some of them are not private as they are used to carry out different activities like counselling, testing, storing of drugs, and storing of records, among others.

One unsatisfied client interviewed supported this when he said that, "We are counselled in tents while seated down on the grass, as the chairs are very few, and this is so

uncomfortable. There is no privacy as the counselling room is also used as a laboratory, making someone receiving pretest counselling service to be heard by the people in the laboratory section who might have come for other services".

Analysis further noted that people receive counselling and testing services from health centers within Juba, as 84.1% of respondents agreed that they have tested for HIV from health centers in Juba district, and 14.4% of respondents disagreed with the above. This therefore suggests that the majority of people within the community test for HIV at health centers. Analysis also noted that Pre-test counselling is available in health centers within Juba, as 89.4% of respondents agreed, and only 1.5% of respondents disagreed with the above. When asked about the availability of post-test counseling in the health centers in Juba, a total of 93.2 % respondents agreed that they were counselled after being tested for HIV (post-test counselling), and only a few respondents (2.3%) were neutral to the statement. This means that post-test counselling services are provided in health centers within Juba.

This study also revealed that people in Juba receive HIV test results from their counselor without waiting for too long, as 72% of the respondents agreed on the above, leaving out only 21.2% of respondents who disagreed that they didn't receive HIV test results from their counselor after waiting for too long. Analysis also indicated that 81.8% of the respondents agreed that they understood their results through the explanation of the counsellors, while 2.3% disagreed with this. This, therefore, means that there was a high level of understanding of results through explanation from the counsellors in health centers. The study also found that the majority of HIV positive clients in Juba are in the post-test club(s), 56.1% out of the 142 respondents agreed to it, 41.6% of respondents disagreed, and only 2.3% of the respondents were undecided. On the continuous availability of counselling services within the community, 97.7% of respondents agreed that they continue to receive counselling from the nearby health centre these days, and only 2.3% disagreed with the above. This therefore suggests that community members who are HIV positive in Juba continue receiving counselling from nearby health centers to enable them adopt positive living.

On counselling and testing (HCT), preventing new HIV infections in the community in Juba, statistics indicated that 70.5% of the respondents agreed that counselling and testing (HCT) are preventing new HIV infections in Juba, and 29.5% of respondents disagreed with this statement. Counselling and testing are therefore preventing HIV infections and prevalence in Juba. On counselling and testing being effective in increasing access to treatment, results of the analysis found that 90.1% of respondents agreed that counselling and testing (HCT) is increasing access to treatment (ART inclusive) and care in their community, whereas 9.9% of the respondents disagreed with this. This therefore indicates that there was a high level of counselling and testing (HCT), which increased access to treatment (ART inclusive) and care in their community.

The study found that although counseling and testing (HCT) has increased access to treatment (ART inclusive) and care in the community in Juba, there are still cases of clients who stubbornly refuse to start treatment, as confirmed during the interview when one of the sub-county HIV/AIDS focal point persons interviewed
said,

"There are clients who either refuse or stop taking prescribed medication after getting drug resistance problems, and most of them end up dying". Another focal point person interviewed on the above said that;

"Access to treatment is becoming of limited use, especially among men, most of whom are drunkards who don't follow advice given to us during counselling, and most of them don't take their medication at the right time as they get drunk and forget to do so".

Among the majority of people in the community going for HIV counselling and testing, 80.3% of respondents agreed that the majority of people in their community go for HIV counselling and testing, while 2.3% of the respondents disagreed, yet 4.5% strongly agreed. This means that a high number of people in the community are going for HIV counselling and testing, and this occurs because of a high level of knowledge and sensitization about the service. The study, however, noted that the phobia of positive test results and the issues it would raise among family members, friends, and sex partners, among others, don't make the majority of people in Juba fear going for HCT, as 20% of respondents disagreed with it, and 80% of respondents agreed that this happens.

Correlation Results for HIV Counselling-Testing and HIV Prevalence in Juba

The researcher also tried to establish whether HIV counselling and testing affected the HIV/AIDS prevalence rate by testing the following hypothesis: "HIV/AIDS counselling and testing do affect the HIV/AIDS prevalence rate in Juba".

Table 9: Correlation Results for HIV Counselling-Testing and HIV Prevalence

		HCT	HIV Prevalence
HCT	Pearson Correlation	1	.192**
	Sig. (2-tailed)		.027
	N	142	142
HIV Prevalence	Pearson Correlation	.192**	1
	Sig. (2-tailed)	.027	
	N	142	142

** Correlation is significant at the 0.05 level (2-tailed).

The findings in the table above show the correlations between HCT and HIV Prevalence. The findings indicate the Pearson correlation (r=.192), the significance value (.027), and the number of respondents (N), 142). The correlation coefficient indicates a weak positive strength of the association and statistically significant correlation between HCT and HIV/AIDS prevalence, taking into consideration all the interrelations among the study variables. The weak positive correlation value, therefore, indicates that when the HCT strategy is increased, then the chances of decreasing HIV/AIDS prevalence are likely to increase, though at a low level

Regression Results between HCT and Prevalence in Juba

The contribution of HIV Counselling-Testing, on HIV/AIDS prevalence in Juba was assessed by the use of regression analysis.

Table 10: Model Summary: HCT and HIV/AIDS prevalence.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.192[a]	.037	.030	.38425

a. Predictors: (Constant), HCT

The Model Summary table above revealed that the correlation coefficient *(R),* using the predictor HCT, is .037 and the ***R2*** (.030). This implies that HCT explains only 3.0% variance in HIV/AIDS prevalence in Juba. This also means that 96.3% of HIV/AIDS prevalence is explained by other factors other than the HCT.

Table 11: ANOVA: HCT and HIV/AIDS prevalence

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.737	1	.737	4.992	.027[a]
	Residual	19.195	130	.148		
	Total	19.932	131			

a. Predictors: (Constant), HCT

b. Dependent Variable: HIV Prevalence.

The Analysis of variance (ANOVA) shown in the table above, indicated the overall significance of regression results with, degree of freedom (df)-(1,130), F value of 4.992 which was significant at a confidence level of (P value of .027). After the establishment of the significance of the model summary and ANOVA, the researcher found out that they were both significant at 95% level of confidence. The researcher therefore continued to present the summary of coefficients that were obtained as indicated in the table below.

Table 12: Coefficients HCT and HIV/AIDS prevalence

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.557	.445		5.742	.000
	HCT	.270	.121	.192	2.234	.027

a. Dependent Variable: HIV Prevalenc

The coefficients above indicate that HCT significantly contributes to the equation for predicting prevalence, (y=a +bx), where y is the dependent variable, a is the constant, and b is the HCT value. Prevalence=2.557 + 0.27 HCT, the p-value of (0.027), clearly reflects that HCT has a significant, positive effect on HIV Prevalence. The standardized coefficient of 0.192 means that any unit improvement of HCT decreases and affects HIV/AIDS prevalence rates by 19.2%. In conclusion, the results indicated that provision of HIV/AIDS counseling and testing had a positive effect on HIV/AIDS prevalence rates in Juba. Therefore, the Null hypothesis that stated that HCT does not affect HIV/AIDS prevalence rate was rejected, and the research hypothesis was accepted.

Discussion

HCT SERVICES and HIV/AIDS Prevalence

From regression analysis, HCT was the most significant predictor in affecting HIV/AIDS prevalence rates in Juba district according to the ranking of all the predictor variables used in this study and factor analysis showed that the components of HCT that affect the prevalence of HIV/AIDS in Juba were; availability of counseling and testing (HCT) services in the community, having knowledge on counseling schedules in health centers, being tested for HIV from the health centers, discouraging phobia that prevent people from carrying out HCT, encouraging the majority of people to go for HCT, increasing access to treatment (ART inclusive) and care through HCT, and ensuring that people

who have tested understood their results through proper explanation of the counselor. Other factors include ensuring that counsellors/counselling assistants are available all the time and that people receive their HIV test results from counsellors without waiting for too long, carrying out post-test counselling in addition to ensuring that people continue to receive counselling from nearby health centers; adoption of proper behavior (ABCD) and ensuring that all HIV positive clients are in the post test club(s).

These results were in line with the U.S. centers for disease control and prevention, (2010) assertion that knowing whether you have HIV infection through counselling and testing would not only alert one on the need to seek medical care to prevent or delay life- threatening illness but the test result (positive or negative) would also help one's doctor determine the cause and best treatment of the various illnesses a person may have now or in the future. They advanced that knowing test results would help HIV positive people protect their sex partner(s) from infection and illness if their partners are not infected in addition to helping couples assess the safety of having a child and stress reduction as knowing your HIV status, even if you are infected (positive test result) may be less stressful for some people than the anxiety of thinking you might be infected but not knowing and if your result indicates you are not infected (negative), you can take action to be sure you don't become infected in the future.

U.S. centers for disease control and prevention, (2010), also points out some of the reasons why people may not seek counseling and testing among which include stress and phobia of a positive test result and the issues it would raise among family members, friends, and sex partners which people think would be more harmful than not knowing if they are infected, and fear that others may perhaps find out their result without their permission and concern about discrimination. Khobotlo et al. (2009) agree with the above views when they cited surveys in Lesotho which indicate that sex work is regarded as morally reprehensible, and the country's national AIDS policy explicitly notes that the stigma associated with sex work deters sex workers from seeking HIV testing and other health services. It's noted by Family Health International (2009) that counselling and testing (CT) is one of the most rapidly expanding HIV program services in the world, and propelling its increased demand is the recognition of CT's role in both preventing new HIV infections and increasing access to care and treatment (including antiretroviral therapy). It is suggested that improved access to HIV testing and counselling and to antiretroviral therapy could significantly reduce infection rates (Granich et al., 2009; Lima et al., 2008). It is recommended that health-care providers inform women who are infected with HIV (after counselling and testing) of the potential negative immunological effect of pregnancy (as women living with HIV who become pregnant experience a sharper decline in CD4 cells than non-pregnant women), offer women contraception and prioritize pregnant women for antiretroviral therapy if eligible (Van der Paal et al., 2007) as cited by UNAIDS, (2009).

Conclusion

HCT was the most significant predictor affecting HIV/AIDS prevalence in Juba, and under the HCT dimension, several factors were affecting HIV/AIDS prevalence in Juba. Unless these factors are addressed, the effectiveness of all HIV/AIDS preventive initiatives in the reduction of HIV/AIDS prevalence in Juba might not work as HCT is so critical in any intervention aimed at addressing the problems related to HIV/AIDS.

Limitations of the Study

The study acknowledged potential limitations such as sampling bias, response bias, and operational constraints that could impact the findings.

Recommendation

CAP-AIDS Juba, in its research, has approved that a Participatory Radio Campaign Model has a great impact not only on upscaling HCT but also on male participation. A strategy that combines various approaches in promoting HCT will have a greater impact on reducing HIV/AIDS prevalence

Acknowledgement

I am profoundly grateful to several individuals whose support and guidance have been invaluable in the completion of this research project.

First and foremost, I extend my deepest gratitude to my supervisor, Dr. Dennis Mubiru, whose expertise and insightful guidance have been pivotal throughout this research process. His patience and scholarly advice have been crucial in shaping both the direction and execution of this study.

I also wish to thank the faculty and staff of the School of Postgraduate Studies and Research at Team University–Uganda for their administrative and academic support. Their willingness to help and their dedication to maintaining a conducive learning environment have greatly enriched my educational experience.

My appreciation also goes to the health officials and participants in Juba County, Central Equatoria State, who generously gave their time and shared their insights and experiences with me. This study would not have been possible without their cooperation.

I am especially thankful to my family and friends for their endless love, moral support, and encouragement throughout my academic journey. Their belief in my capabilities has been a constant source of strength and motivation.

Finally, I am thankful to all who were involved directly or indirectly in the successful completion of this study. Your contributions have been immensely appreciated.

Abbreviations

PMTCT: Prevention of mother to child transmission of HIV.
MTCT: Mother to Child Transmission.
AIDs: Acquired Immune Deficiency Syndrome
ANOVA: Analysis of variance.
WHO: World Health Organization.
UNAIDS: Joint United Nations Programme on
HIV/AIDS: Human Immunodeficiency Virus**.**
NGO: Non-Governmental Organization
ARV: Antiretroviral

Source of funding

There is no source of funding.

Conflict of interest

There is no conflict of interest.

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Global Journal of Health and Innovation Burundi
Vol. 2 No. 12 (2025): December 2025 Issue
https://doi.org/10.70659/gjhib.v2i12.80
Original Article

PUBLISHER DETAILS:

Burundi Publishing

Burundi Publishing

Contact: +257 6266 2725

Email: burundipublishing@gmail.com

Website: https://burundipublishing.com

Address: Avenue de l'université,Quartier Rohero I, Bujumbura, Burundi