



# HIV PATIENT'S PERCEPTION AND UTILIZATION OF INTEGRATED SERVICES IN EMBU REFERRAL HOSPITAL, KENYA

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**Abstract:** Globally, there are approximately 36.7 million people living with HIV, with an estimated 3.8 million individuals newly infected with HIV and about 5,000 new infections per day in the year 2017-2018. Integration of HIV treatment with primary care services improves effectiveness, efficiency and equity in service delivery. In Embu teaching and referral hospital, integration of HIV services with other primary health services were initiated in 2014 and up to date, the integration has not been fully adopted by the clients therefore, the study sought to establish the perception of seropositive clients on integrated HIV and primary health care services in Embu Teaching and Referral hospital. A cross sectional survey design was used to collect data from a sample of 302 sero positive clients who were selected using simple random method. A structured and semi-structured questionnaire was used to collect quantitative data while key informant interviews (KII) and Focus Group Discussions (FGDs) helped to collect qualitative data. The tools were reliable at cronbach's alpha of 0.817 SPSS version 23 was used to analyze the data. Qualitative data from focused group discussions and key informant questionnaire was analysed thematically and theme summaries given under each theme. A binary logistic regression model was used to predict the effect of other determinants of utilization of integrated HIV services and primary health care services. Results: Majority of the respondents (59.6%) were aged over 35 years with majority being female (58.9%) and the married were 57.6% of the total sample. On perception on integrated services 76.5% had a positive perception. Conclusion: Majority of the clients had a positive perception towards the integrated service. They perceived the staff attitude as positive and acknowledged that integration allowed them opportunities to share their life experiences. However, they felt there was need to increase services provided under the integrated arrangement such as cancer screening, TB clinics and other services such as blood pressure monitoring. Recommendation: The Government of Kenya through the Ministry of Health should engage the county government and support from NGO's to come up with structures and resources needed to expand the facility in terms of facility space and incorporation of other primary health care services like cancer screening, diabetes screening, dental and ophthalmology services.

**Key words:** Perception, integrated services, Embu teaching and referral hospital, HIV patients, primary health care services

## I. INTRODUCTION

Globally, there are approximately 36.7 million people living with HIV in the year 2017-2018, with an estimated 3.8 million individuals newly infected with HIV and about 5,000 new infections per day [1]. Among these people 2.1 million are children and teenagers below 15 years of age, most of them from sub Saharan Africa. The vast majority of people living with HIV are in low- and middle-income countries. In 2017, there were 19.6 million people living with HIV (53%) in eastern and southern Africa, 6.1 million (16%) in western and central Africa, 5.2 million (14%) in Asia and the Pacific, and 2.2 million (6%) in Western and Central Europe and North America. Despite implementing some of the preventive measures many people living with HIV or at risk for HIV still do not have access to proper care and treatment [1].

Efforts have been made by the global community to prevent HIV and treat related illnesses. However too many people with or at risk of contracting HIV have no access to care, treatment and prevention [1]. Nevertheless, global goal achievement of zero new HIV infections, zero AIDS related deaths and zero discrimination has been achieved in most developed countries. In Asia and Pacific region remarkable progress has been made as indicated by 26% decline in new HIV infections from 2001-2012 and a 46% increase in access to Antiretroviral Therapy (ART) from 2009 to 2012 [2]. Majority of developing countries need more time to achieve the zero new HIV infections goal. They need to be more innovative in treatment, prevention and putting up more programs to be able to achieve the overall goal. Some of the pillars have been put in place to achieve this goal and one of the pillars is to adapt delivery systems. This entails decentralisation and integration of HIV care and treatment with other HIV and non-HIV services such as drug dependency services, maternal, new-born and child health or Tuberculosis services. The primary aim of this pillar is to increase community engagement for HIV testing and counselling, care retention and early initiation of ART [2].

In Sub-Saharan Africa, integration of HIV and family planning services has been shown to have several benefits [3]. These includes services rendered are affordable to clients, reduction of stigma and discrimination. Other studies conducted in South Africa on perception of integration of HIV and sexual reproductive health care, suggested a preference for integrated care among female clients, particularly because of stigma reduction and higher access to contraceptives [4]. Some of the perception of clinicians and clients on integration of primary health care and HIV services showed that about 80% of the respondents were satisfied with integration because the organization of services and confidentiality prevented stigma and discrimination. Majority of participants in the fully and partially integrated facilities reported that clinicians treated them with respect, privacy and confidentiality. Other participants referred staffs as rude and unfriendly, increased waiting time before one is attended to, interruption of consultation which was seen as infringement of privacy. Similar study showed that clients felt that there were delays related to lack of punctuality to report on duty after lunch and tea break, poor staff communication regarding delays in patients consultations like when they break for lunch the staffs do not communicate to the clients [5].

Majority of the respondents in a study conducted in Ethiopia reported positive feelings towards the disease and therefore can disclose their status to their families comfortably and 50% of the respondents mentioned that TB carry the same stigma as HIV, this kind of stigma is reduced when integration of services is embraced.[6].Integration of HIV services and TB treatment demonstrated relative success of integrated and co-located TB/HIV services in Swaziland, and revealed timely ART uptake for HIV-positive TB patients in resource-limited, but integrated settings [7].

A research carried out on patients perception on HIV treatment integration with other services reported that most clients were satisfied with integration of services [8]. However, the clients reported that the staffs' attitude, number of staffs in health facilities and health care provider, patient communication were significantly affecting patients' satisfaction levels. In Cameroon integration has led to increased utilization of HIV services, therefore when integration is implemented well and staffs' attitude and communication improved; patient level of satisfaction was predicted to improve significantly [8].

In Kenya, a study done on experiences of health care providers with integrated HIV and reproductive health services revealed that more clients were satisfied and were willing to uptake HIV testing than in stand-alone clinics. It also revealed that with increased number of clients, infrastructural deficiencies hindered effective delivery of the services as well as limiting quality time for counselling of the patients due to shortage of staffs in relation to high numbers of in flowing clients [4]. Some providers reported that integration enhanced job satisfaction by providing a better quality service, which led to their receiving more regular positive feedback from clients. Collocation of HIV services and primary health care addresses the issue of scarce resource allocation, integration maximizes use of health facility structures and ensures that funds targeted for construction of HIV facilities will also benefit primary health care; therefore both patients can access health care regardless of their HIV status [9].

A recent review identified various discriminatory behaviours and negative attitude towards HIV patients. Some of the behaviours were denial of care, and testing or status disclosure without consent, verbal abuse, additional fee and overuse of gloves especially health care providers on HIV patients. It has been speculated that stand alone HIV services may be stigmatizing, as clients are labelled as they walk through the door resulting in an involuntary disclosure of status. Other structural influences include avoidance or isolation of HIV clients and labelling of buildings and rooms [9]. Integration is also likely to reorganize health care delivery which may disrupt service provision and cause dissatisfaction among patients. Further integration of specialized services into primary care services may not always result in better patient and service level outcome for example integration of HIV services with sexual and reproductive health services may be hindered by increased patient burden, inadequate staffing and resistance from existing health care workers. Integrating services for STI into routine health services may result in lower utilization and reduced patient satisfaction [10]. In Embu County, HIV prevalence is at 3.3% according to Kenya HIV Estimates 2015. The County contributed 0.7% of the people living with HIV in Kenya, with women having a higher prevalence (4.5%) than that of men (2.0%). In a report released by Kenya Demographic Health Survey in 2014, it is evident that 36% of men and 16% of women in Embu County never sought HIV testing services; therefore the county needs more innovative strategies to improve on HIV testing and counselling, reduce HIV related stigma and promote client satisfaction towards HIV services, to bridge the unmet gaps [11].

## II. METHODOLOGY

A cross-sectional descriptive survey design was used to generate both quantitative and qualitative data. This design was appropriate since the study was carried out at a specific point in time without any manipulation of the variables. The study population in this study were sero-positive HIV clients. A target population of 1650 clients was applied as per the comprehensive care clinic register; approximately 55 clients per day receive HIV services, a sample of 302 respondents was used in the study. They were appropriate for this study because they are informed about integration and they are the main beneficiaries of these services. Reliability of the tool was tested and the Cronbach's alpha was calculated and was found to be at (p=0.817) which showed a high degree of reliability of the variables. Quantitative data was analyzed using SPSS version 23 and thematic analysis was done for qualitative data using N-Vivo version 11. A simple logistic regression model was fitted, to determine the set of significant variables for each of the dependent variables. Variable selection for the multivariable analysis was done dropping for all those covariates with a p-value >0.05 from the main analysis. The second stage of variable selection entailed forward selection coupled with the likelihood ratio tests. 5% level of significance was applied on all analyses. Perceptions were assessed through a set of 10 likert form statements where responses were "agree", "disagree", "strongly agree" and "strongly disagree". Three statements that had been negatively phrased were reverse coded before analysis. Those who either agreed or strongly agreed were considered as having a positive perception, while those who either disagreed or strongly disagreed were considered as having a negative perception. Positive perception implied that the patients were satisfied, while negative perception implied that the patients were not satisfied (Table 4).

## III. RESULTS AND DISCUSSION

### A. Demographic characteristics

The study showed that more than half of respondents (50.6%) were 35 years and above, followed by those between 32-35 at 21.2%. The age group of 27-31 was the least with 1.7% those between 18-22 years were 8.9% (Table 1). The majority of the respondents i.e. 58.9% were females while 41.1% were males. Most of the respondents were married (57.6%), single were 36.8% and divorced were the least with 5.6%. Protestants were 51% while Muslims were the least (1.3%). With respect to level of education. Most of the respondents attended secondary school (38.1%), followed by primary school (36.8%). Most of the respondents were self employed (49.7%) and the least were unemployed (16.2%). More than half of the respondents reported that distance to the facility was 4-5km (58.9%).

Table 1 Non-illness related demographic characteristics

Characteristic	Frequency (n)	Percent (%)
<b>Age in years</b>		
➤ 18-22	27	8.9
➤ 23-26	26	8.6
➤ 27-31	5	1.7
➤ 32-35	64	21.2
➤ Over 35	180	59.6
Total	302	100
<b>Gender</b>		
➤ Male	124	41.1
➤ Female	178	58.9
Total	302	100

<b>Marital status</b>		
➤ Married	174	57.6
➤ Single	111	36.8
➤ Divorced	17	5.6
Total	302	100
<b>Religion</b>		
➤ Catholic	130	43
➤ Protestant	154	51
➤ Muslim	14	4.6
➤ Others	4	1.3
Total	302	100
<b>Level of education</b>		
➤ Primary	111	36.8
➤ Secondary	115	38.1
➤ Tertiary	66	21.9
➤ Others	10	3.3
Total	302	100
<b>Employment status</b>		
➤ Employed	103	34.1
➤ Unemployed	49	16.2
➤ Self-employed	150	49.7
Total	302	100
<b>Distance from home to facility</b>		
➤ Below 1km	27	8.9
➤ 2-3km	91	30.1
➤ 4-5km	178	58.9
➤ Above 6km	6	2
Total	302	100

According to the findings of this study the majority of the respondents were aged 35 years and above (59.6%). It was noted that during the interview that this age group had utilized the services for many years. Majority of the respondents were married and most of them were females. The findings on gender agree with KDHS study, which showed that in Embu County, women have a higher HIV prevalence than that of men [22]. These findings concurred with a study that was conducted in Vietnam on level of satisfaction which indicated satisfaction as a factor on utilization of health services. Tran, (2012) reported that age, marital status and female gender were associated with higher rates of satisfaction which significantly affects their level of utilization.

**Table 2 Illness related demographic characteristics**

Characteristic	Frequency (n)	Percentage (%)
<b>If currently on ART</b>		
• Yes	302	100
• No	0	0
Total	302	100
<b>Duration on ART</b>		
• Up to 12 months	10	3.3
• 12-24 months	65	21.5
• Over 24 months	227	75.2
Total	302	100
<b>Combination of HIV &amp; other services under one roof</b>		
• Yes		
• No	298	98.7
Total	4	1.3
	302	100
<b>Duration of medical care</b>		
• Less than 1 year	2	0.7
• 1-2 years	84	27.8
• 3-5 years	81	26.8
• More than 5 years	135	44.7
Total	302	100

All the respondents were on ART at the time of data collection. Majority i.e. 75.2% (227) had been on ART for more than 24 months, 21.5% (65) had been on ART for 12-24 months while 3.3% (10) had been on ART for up to 12 months. Majority i.e. 98.7% (298) had received the combined HIV care and other services under one roof, while 1.3% (4) had not. Concerning duration of medical care in the clinic, 0.7% (2) had received care for less than 1 year, 27.8% (84) had received care for 1-2 years, and 26.8% (81) had received care for 3-5 years while 44.7% (135) had received care for more than 5 years.

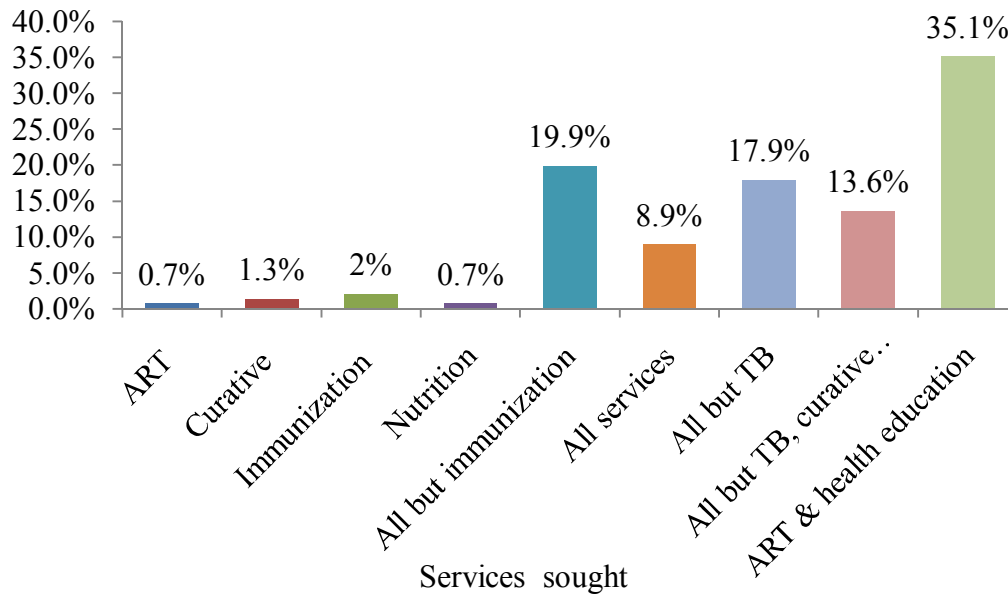


Figure 1 Services sought at the clinic

Most of the respondents in Figure 1 shows that i.e. 35.1% (106) were seeking ART services and health education, while the services least sought after were immunization and curative services with 2% (6) and 1.3% (4) respectively.

### B. HIV patients' utilization of integrated HIV and primary health care services

Utilization level was determined by the number of items that respondents utilized as recommended. Out of five items, those who utilized at least 4 out five were considered as utilizing integrated HIV and primary health care services while those who utilized below 4 were considered as not utilizing the services. The findings of this study showed that 99.3% of the respondents visited the health facility immediately whenever they experienced an illness related to HIV infection, while 0.7% tried other measures at home (Table 3). The majority i.e. 66.9% had ever missed appointment given in the course of care while 33.1% had never missed any appointment. Most respondents i.e. 77.8% had never missed to take any drugs or treatment options given in the facility of care while 22.2% had missed some treatment. Concerning use of alternative medicine outside conventional prescribed medical care, all the respondents were found to avoid such treatments. Likewise, all the respondents consulted the facility care provider whenever they had bothering questions about the care they were receiving (Table 3).

Table 3 Overall utilizations of integrated HIV and primary care services

Service Indicator	Utilization %	Non-utilization %
Action taken after HIV related illness	99.3	0.7
Appointments given in the clinic	66.9	33.1
Taking prescribed drugs	77.8	22.2
Avoidance of alternative medicine	100	0
Consultations on areas not clear	100	0

The findings on drug adherence agree with Risenga (2016) findings which showed that most patients were satisfied with the services offered by the care providers, they were informed on how the drugs work and through this the patients could adhere to treatment. The findings of this study demonstrated that the level of utilization of integrated HIV and primary care service was quite impressive because majority of respondent had never missed any appointments. Moreover, most of them were adhering to the treatment and they were consulting health workers on areas not clear to them. These findings were in agreement with those of Mutemwa & Ndwiga (2016). The integration of HIV care and TB is perceived to increase adherence to medication and early initiation of treatment because of frequent follow ups and reminders done by health workers.

There is a positive association between integration of the services and lower CD4 counts, which was accounted for by adherence to medication and early initiation of ART and TB treatment (Mutemwa & Ndwiga, 2016). In this study more than a half of the respondents i.e. 86.8% utilized integrated HIV and primary health care services while 12.9% did not (Figure 2).

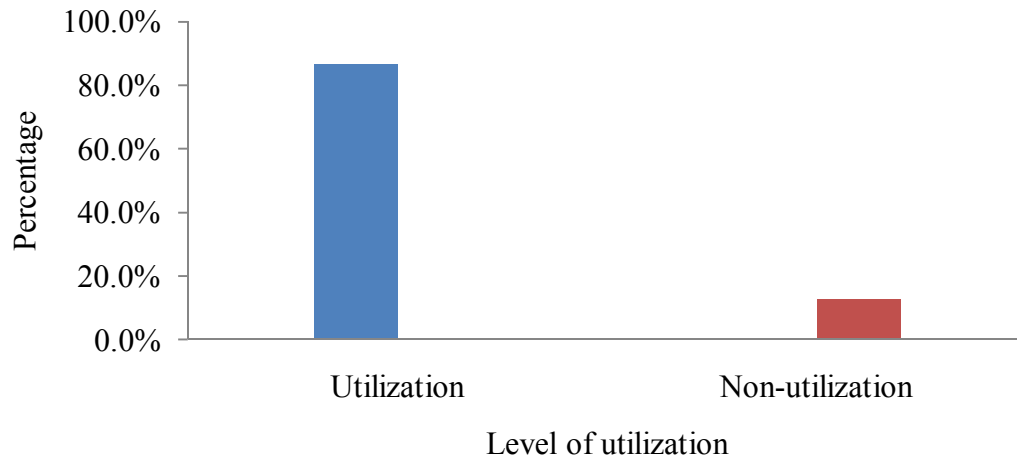


Figure 2 Utilization level of HIV integrated primary health care services

Figure 2 shows that majority of the respondents i.e. 86.8% (262) utilized integrated HIV and primary health care services while 12.9% (39) did not.

### C. Perceptions of HIV patients on integrated primary health care services

Most of the respondents agreed with the statement on perception (Table 4). The findings show that most respondents either “agreed” (on average 48.34%) or “strongly agreed” (on average 31.34%) which was indicative of an overall positive perception (Table 4).

Table 4 Perceptions on HIV integrated services

Item	A	SA	D	SD
All services under one roof are more user friendly	57%	36.1%	6.3%	0.7%
All services under one roof reduce time for care	49.3%	35.1%	13.6%	2%
Integrating services ensures that as patient or client I miss nothing during my appointments	54%	38.4%	6.3%	1.3%
All services meant for me and fellow clients in the facility are well coordinated in the facility	52%	39.4%	7.3%	1.3%
I am able to receive more than one health care service from the same provider	44%	22.8%	30.5%	2.6%
There is adequate attention given to my health care needs	47%	33.4%	15.6%	4%
I'm rarely referred to another hospital for health care	43.7%	21.5%	22.8%	11.9%
There are many complaints from fellow patients about missed services in the facility( reverse coded)	44.7%	28.1%	14.6%	12.6%
Each service provider seems too busy to listen to personal needs (reverse coded)	47%	29.1%	12.6%	11.3%
The care is too generalized because the service providers have no time(reverse coded)	44.7%	29.5%	15.2%	10.6%
Average perception scores	48.34%	31.34%	14.48%	5.83%

Key A= Agree, SA= strongly agree, D= Disagree, SD= strongly disagree. Table 4 Shows that most respondents either “agreed” or “strongly agreed” which was indicative of an overall positive perception. Findings of this study are in agreement with Odeny’s findings. Working in Nyanza region he showed that clients’ satisfaction and improved services were results of integration of HIV services and other primary health care services. Most clients were satisfied with the integration since they were all treated with equity and in a common place. This helped reduce the stigma associated with HIV and health seeking behaviour also changed which significantly influenced utilization of integrated service (Odeny, 2013). Similarly, Fiona, *et al* (2017) indicated that integration of HIV services with mental health services led to increase in client’s satisfaction, with a positive outcome when the integration model was implemented.

Most of the patients with psychiatric illnesses and also suffering from HIV were treated with respect regardless of their HIV status. This increased the uptake of HIV services and adherence to treatment (Fiona, *et al.*, 2017). In this study 76.5% of the respondents had a positive perception of the services offered at the clinic while 23.5% had a negative perception (Figure 3). Positive perception was indicative of satisfaction while negative perception was indicative of dissatisfaction. A test on perceptions against utilization of integrated HIV and primary health care services showed that there was no significant relationship between client perceptions and utilization of integrated HIV and primary health care services ( $\chi^2 = 2.486$ ,  $df = 1$ ,  $p = 0.092$ ;  $LR = 3.193$ ;) (Table 5). Therefore, the null hypothesis that there is no statistically significant relationship between perception and utilization of HIV integrated primary health care services was accepted.

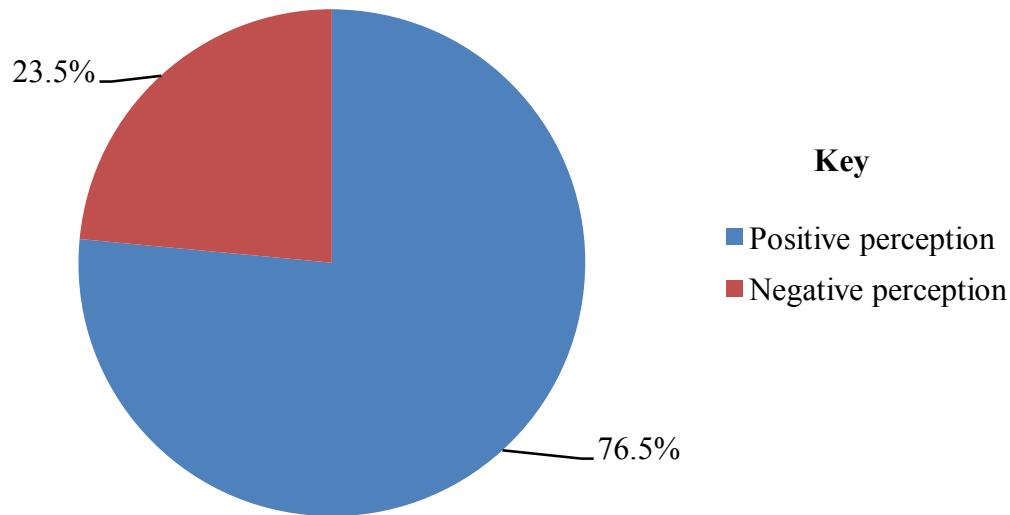


Figure 3 Perception towards HIV integrated services

Majority of the respondents 76.5% of the respondents had a positive perception of the services offered at the clinic while 23.5% had a negative perception (Figure 3). Positive perception was indicative of satisfaction while negative perception was indicative of dissatisfaction. Perceptions were cross-tabulated against utilization of integrated HIV and primary health care services

Table 5 Association between perceptions and utilization

a. Count

		Perception		Total
		Positive perception	Negative perception	
Utilization Versus non-utilization	Utilization	197	66	263
	Non-utilization	34	5	39
Total		231	71	302

b. Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2.846 <sup>a</sup>	1	.092		
Continuity Correction <sup>b</sup>	2.204	1	.138		
Likelihood Ratio	3.193	1	.074		
Fisher's Exact Test				.107	.063
Linear-by-Linear Association	2.836	1	.092		
No. of Valid Cases	302				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 9.17.

b. Computed only for a 2x2 table

This results imply that client's perception did not have any influence on utilization of integrated services ( $\chi^2 = 2.486$ ,  $df = 1$ ,  $p = 0.092$ ;  $LR = 3.193$ ). This findings do not agree with those of Buh's and Atashili's (2016), which revealed that that most clients were satisfied with integration of services. However, the staffs' attitude, number of staffs in health facilities and health care provider, patient communication significantly affected patients' satisfaction levels.

When the respondents were interviewed it was evident that their utilization level was determined by the level of perception which is not as depicted in the results after tabulation. Therefore, the findings of this study are in disagreement with other studies (Buh et al, 2016). These differences could be closely linked with preference to utilize the facilities due to other factors like convenience and cost

#### **D. Qualitative data analysis on perceptions**

Qualitative data from focused group discussions and key informant questionnaire was analysed thematically and theme summaries were given under each theme. The emerging themes from focussed group discussions were: staff attitude, sharing information with others, and availability of resources.

##### **A. Staff attitude**

The staff attitude was generally positive as perceived by the clients. Staffs were patient, nice, humble, understanding, polite and they gave undivided attention to the clients. They expressed readiness to attend to patients' needs, by being good listeners which showed a caring and concerned attitude for patients. However, some staffs were a bit strict on late comers who ended up missing out on important services like health education and counselling. Someone narrated,

*"Staffs are very harsh when one comes to the clinic late. This is my body, am an adult and voluntarily came to the clinic to know my HIV status, I have been utilizing this services voluntarily, coming late once in a while is not one's fault and no one should incriminate me if I fail to attend 8a.m health talk sessions."* (Focused group discussion respondent 4)

Some staffs also failed to recognise the patients in pain and appropriate pain management measures were ignored.

##### **B. Sharing information with others**

Patients shared on how drugs were affecting them. Old clients shared their experiences, patients learnt from each other, patients were able to interact and learn, some clients came from other facilities and shared their experiences, staffs also shared about their personal health and this motivated the patients a lot. There was a lot of sharing of experiences related to stigmatization.

##### **C. Availability and use of resources**

Clients felt that the waiting times needed to be reduced. More lab tests e.g. cancer screening, pregnancy tests for youths, and blood sugar monitoring needed to be incorporated in the clinic to cover all illnesses even the minor ones. Multivitamin drugs needed to be availed all the time and health talks for patients who could not make it to come early in the morning, when health talks usually took place. More space needed to be availed for the waiting bay and more clinics built e.g. chest clinic for TB patients. The themes for key informant questionnaire were *integrated services* and *utilization of integrated services*.

##### **A. Integrated services(key informant interview)**

Integrated services meant getting a package of standardized care under one roof. The services were efficient in terms of saving time and space, thus, enabling clients get satisfaction of service offered. Challenges included lack of some essential services such as cervical cancer screening necessitating referral to other departments. There was limited space and clients waited outside the room for a certain service provider to attend to them. Support was needed from NGOs and county government in funding essential services missed out, in construction of more rooms and providing reagents and all consumables.

##### **B. Utilization of integrated services**

The services were accessible to clients easily enhancing more utilization by clients demanding for them e.g. partner testing. Integration of services led to job satisfaction in serving clients. Using the available resources, the health system had distributed and allocated funds and personnel to serve people living with HIV. During focus group discussion, it was broadly argued that generally staff attitude was generally positive as perceived by the clients. Staffs were patient, nice, humble, understanding, polite and they gave undivided attention to the clients. However, some staffs were a bit strict on late comers who ended up missing out on important services like health education which took place at exactly 8.00am in the morning. This finding echoed what [4] found out that the clinicians could give the patient a listening ear, respect them irrespective of their status and could spend more time with the patient to their satisfaction. Similar study reported that clinicians treated the patients with respect, privacy and confidentiality other participants referred staffs as rude and unfriendly, as depicted in the finding. The findings also concurred with early research done in Kisumu, which reported that educative sessions, and positive staff attitude were of great significance especially in an integrated care program: this session's increased patient's satisfaction [12].

## **IV.CONCLUSION**

Majority of the clients had a positive perception towards the integrated service. They perceived the staff attitude as positive and acknowledged that integration allowed them opportunities to share their life experiences. However, they felt there was need to increase services provided under the integrated arrangement such as cancer screening, TB clinics and other services such as blood pressure monitoring



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