



Original Article

## Perception of Patients and Clinicians on Integration of HIV and Non-Communicable Diseases Care

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The growing concerns over the prevalence of non-communicable diseases (NCDs) among individuals with HIV are widely documented. The management of patients with both NCDs and HIV is equally contested. Several studies show that nationwide and system-wide integration of HIV and NCDs care services would benefit patients. However, the effects of the HIV and NCDs care services integrations are unclear. The study therefore sought to achieve three main objectives. The study sought to determine the perceptions of patients and clinicians on the benefits of HIV and NCDs care services integrations. Secondly, the study explored whether HIV and NCDs care services integrations would cause barriers to quality access to HIV and NCDs health care. Third, the study identified the likelihood of patients' and clinicians' willingness to attend and work for HIV and NCDs co-existing HIV outpatient clinics. Applying a cross-sectional study design with a sample size of 480 participants, interviews were done using structured questionnaires. The study findings revealed that HIV and NCDs care services integrations improve quality of service, are cost-effective, cause crowding and workload, and enhance patients' and clinicians' willingness to attend the clinics. The study concluded that HIV and NCDs care services were much needed to ensure cost reduction, minimise travel from one clinic to the other and improve access to quality health care for those living with HIV and NCDs.

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## INTRODUCTION

Non-communicable diseases (NCDs) like diabetes mellitus (DM), cardiovascular diseases (CVDs) like hypertension, chronic obstructive pulmonary diseases (COPDS), renal diseases, and cancers have emerged as an international pandemic, with even higher rates in developing countries, while HIV remains a global health priority (Terzic & Waldman, 2011). According to Alwan (2011), the burden of NCDs is predicted to result in 36 million deaths annually, with the majority of these fatalities occurring in poor nations under the age of sixty (Haregu et al., 2014).

By 2030, it is anticipated that the prevalence of NCDs would have greatly increased and may overtake communicable illnesses as the leading cause of mortality globally (Haregu et al., 2014). NCDs are now the primary cause of morbidity for this population since people with HIV (PLWH) in low-income countries are living longer due to effective anti-retroviral treatment (ART) (Haregu et al., 2014). Despite the lack of data on co-morbidity rates, certain studies have revealed that PLWH have a greater incidence of NCDs than HIV-negative patients (Bloomfield et al., 2014).

In order to enhance the effectiveness and quality of care and treatment for NCDs among PLWH, the integration of NCDs and HIV services should benefit from the foundation established with HIV treatment scale-up. Reduced appointment frequency for HIV/NCD patients may also increase retention in care. Integration may also lessen the neglect of other health needs that are frequently neglected

through the implementation of vertical programs and may be more cost-effective because resources are shared to address all of the patients' needs (Duffy et al., 2017).

## MATERIAL AND METHODS

The researcher applied a cross-sectional study design with a sample size of 480 participants. Thirty (30) of the respondents were clinicians, while 450 were patients drawn from Jaramogi Oginga Odinga Teaching and Referral Hospital in Kisumu, Kenya. The participants included in the study were those living with HIV and NCDs and were attending HIV outpatient clinics by the time of the study. Besides, the clinicians were those working in HIV and NCDs clinics. The study was conducted after ethical approval by the Maseno Ethical Review committee (MUERC/617/18) and Jaramogi Oginga Odinga Teaching and Referral Hospital Ethical Review Committee (ERC.IB/VOL.1/566). The participants were recruited for the study using purposive sampling techniques, and participation was voluntary. The respondents were provided with debrief sheets, consent forms and structured questionnaires written in English, Kiswahili, and Dholuo. The three languages were necessary to ensure the challenges of the language barrier were addressed. Kiswahili, Dholuo, and English languages are predominantly used in Kisumu, Kenya, and the respondents would be proficient in any of the three.

Structured questionnaires were issued to the respondents. The questionnaires were subdivided into four sections; the demographic section and the

remaining sections focused on three research objectives including the benefits and challenges of the integration of HIV and NCDs care in HIV outpatient clinics. The information about NCDs was obtained from medical records.

## RESULTS

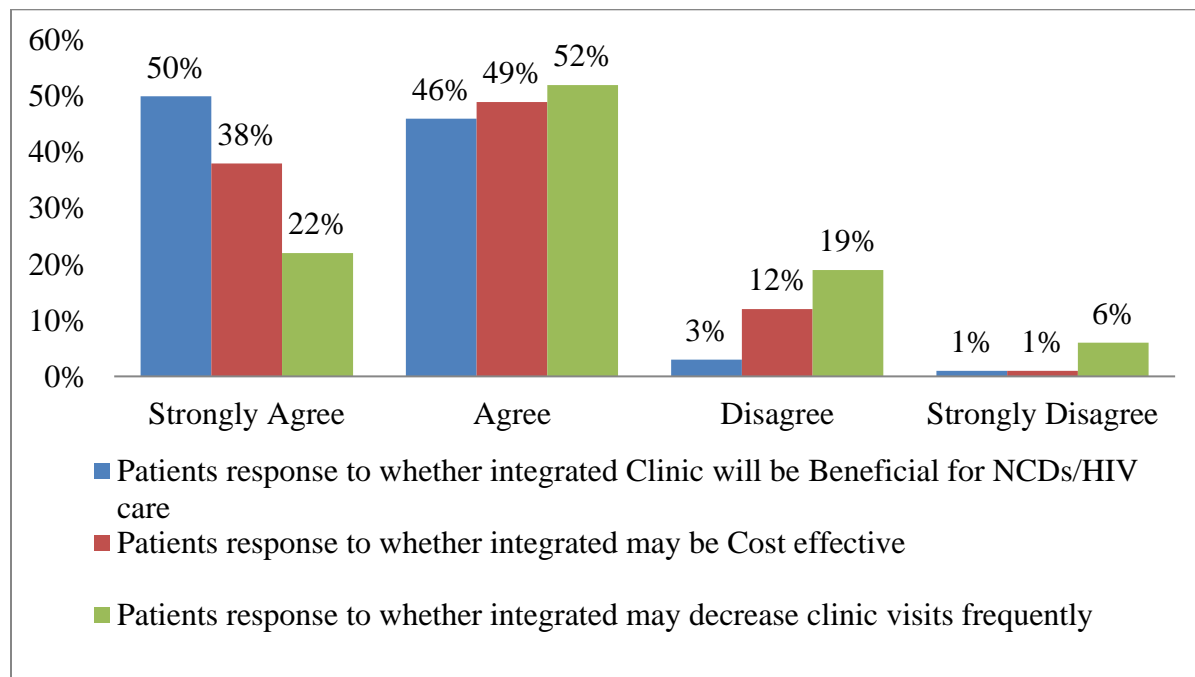
There were three main practical objectives the study aimed to achieve. First, to investigate whether integration of HIV and NCDs care services would benefit HIV and NCDs care in the HIV outpatient clinics. Second, to ascertain if providing HIV and NCDs care in HIV outpatient clinics is hampered by the integration of HIV and NCDs. Third, to investigate how likely clinicians would work and patients to visit HIV outpatient clinics after the integration of HIV and NCDs care services. Moreover, the study broadly investigated the general perceptions of both clinicians and patients about the integration of HIV and NCDs care in HIV outpatient clinics.

To achieve the study objectives, three research questions were set forth for the interviews. First, what is the perception of clinicians and patients on

the benefits of integrating HIV and NCDs care services? Second, do patients and clinicians consider the integration of HIV and NCDs care services a barrier to receiving adequate HIV and NCDs care in the HIV outpatient clinics? Finally, would clinicians and patients be more willing to work and visit HIV outpatient clinics, respectively, following the integration of HIV and NCDs care services?

Regarding the first question, both patients and clinicians strongly agreed that the integration of HIV and NCDs care services improves HIV and other chronic disease care. 224 of the patients estimated at 49.8% strongly agreed the integration of HIV and NCDs care services improves HIV and NCDs care in the HIV outpatient clinics. 207 of the 450 patients interviewed agreed that the integration of HIV and NCDs care services positively impacts HIV and NCDs care in the HIV outpatient clinics. Only 5 of the 450 patients, which accounted for 1% strongly disagreed that HIV and NCDs care in the HIV outpatient clinics would improve due to the integration of HIV and NCDs care services, as shown in *Figure 1*.

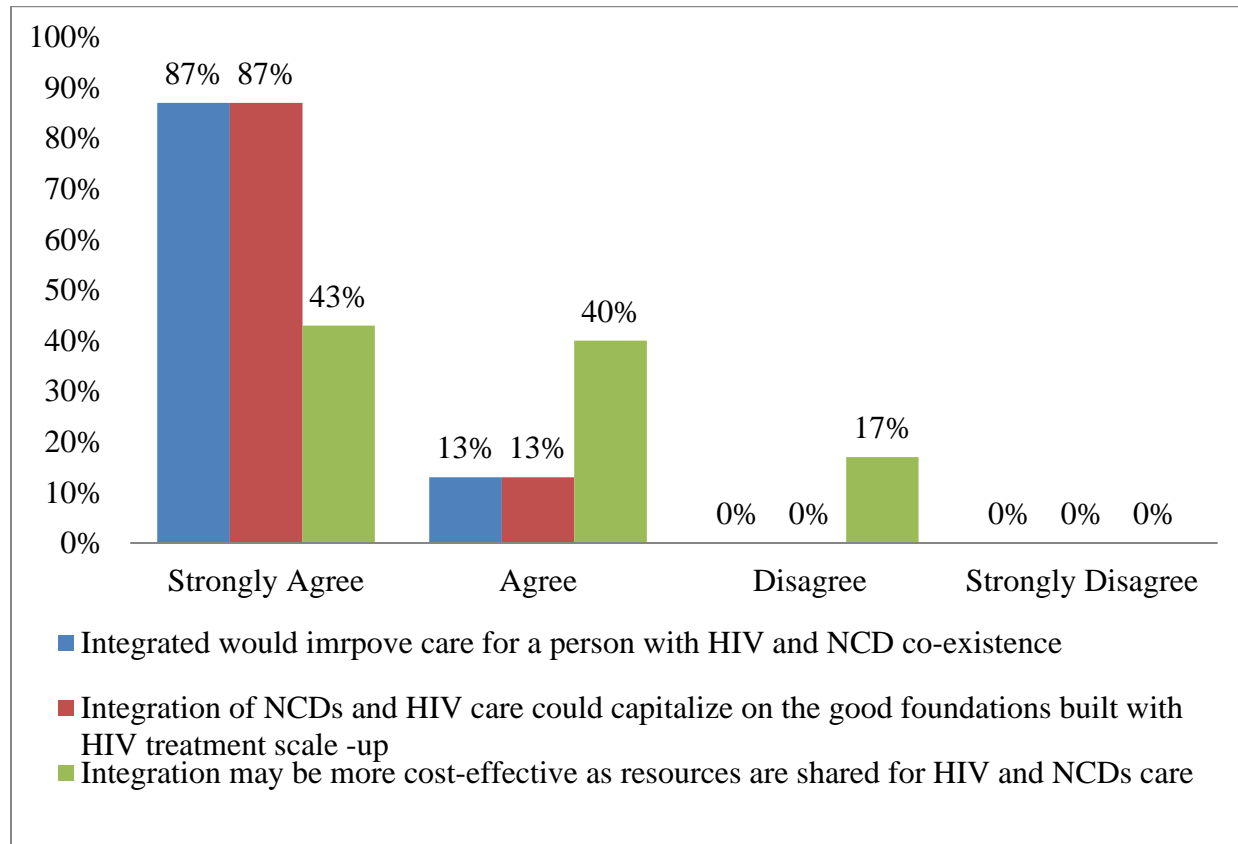
**Figure 1: Patient’s response to whether integration will be beneficial for NCDs/HIV Care may be cost-effective and may decrease clinic visit frequency.**



The majority of the clinicians, which constituted 87%, strongly agreed that the integration of HIV and NCDs care services improves care in HIV outpatient clinics. None of the clinicians interviewed had a contrary opinion regarding improved care at the clinics due to the integration of

HIV and NCDs care services. The remaining 13% of the clinicians agreed the integration of HIV and NCDs care services improves HIV and other diseases care at the HIV outpatient clinics as shown in *Figure 2*.

**Figure 2: Clinician responses on whether integration would improve care, capitalise on the good foundations built and be cost-effective as resources are shared for HIV and NCDs.**



The second aspect of the respondents’ perceptions focused on the cost-effectiveness of integrating HIV and NCDs care services. The patients and the clinicians had complimentary responses to the cost-effectiveness of integrating HIV and NCDs care services and the provision of care in the HIV outpatient clinics. One hundred and seventy (170) accounting for 37.8% of patients strongly agreed with the cost-effectiveness of integrating HIV and NCDs care services. 221 patients estimated at 49.1% agreed, while only 56 (12.4%) and 3 (0.7%) of the patients disagreed and strongly disagreed, respectively (See *Figure 1*). Similar to patients, the majority of the clinicians, specifically 43.3% strongly agreed, and 40% agreed that integrating

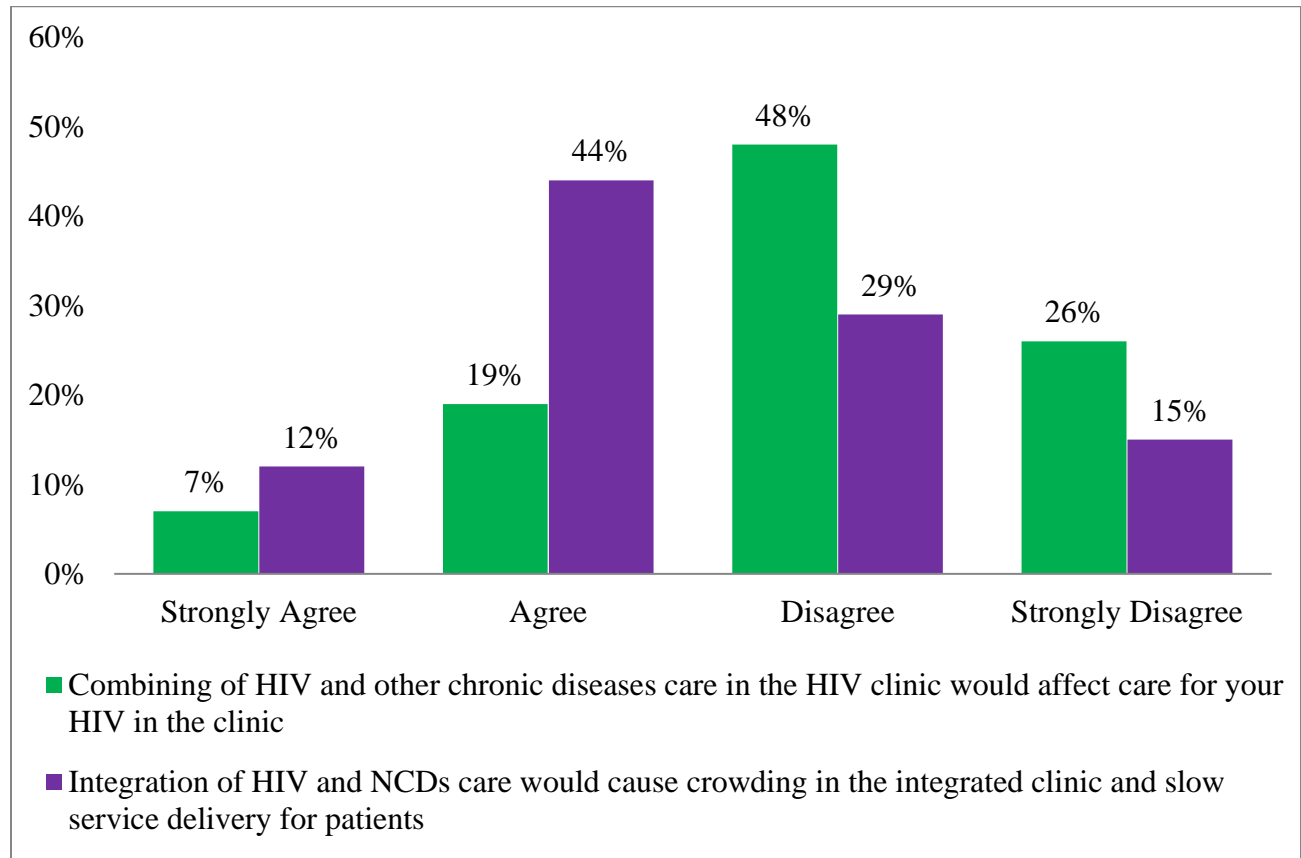
HIV and NCDs care services would be cost-effective for HIV and other diseases care in the HIV outpatient clinics (See *Figure 2*).

Determining whether integrating HIV and NCDs care services cause barriers to accessing HIV and NCDs care at HIV outpatient clinics constituted the second study objective. Most patients disagreed and strongly disagreed that the integration of HIV and NCDs care services would impair the provision of HIV and other diseases care in HIV outpatient clinics. 48% of the patients disagreed, while 26% strongly disagreed with their responses. However, on whether the integration of HIV and NCDs care services would lead to crowding and slow down

service delivery at HIV outpatient clinics, the majority of patients estimated at 44% agreed it would lead to crowding and slow down service delivery. Only 14% of the patients strongly

disagreed that integration of HIV and NCDs care services would cause crowding and slow down HIV and other diseases care in HIV outpatient clinics (See *Figure 3*).

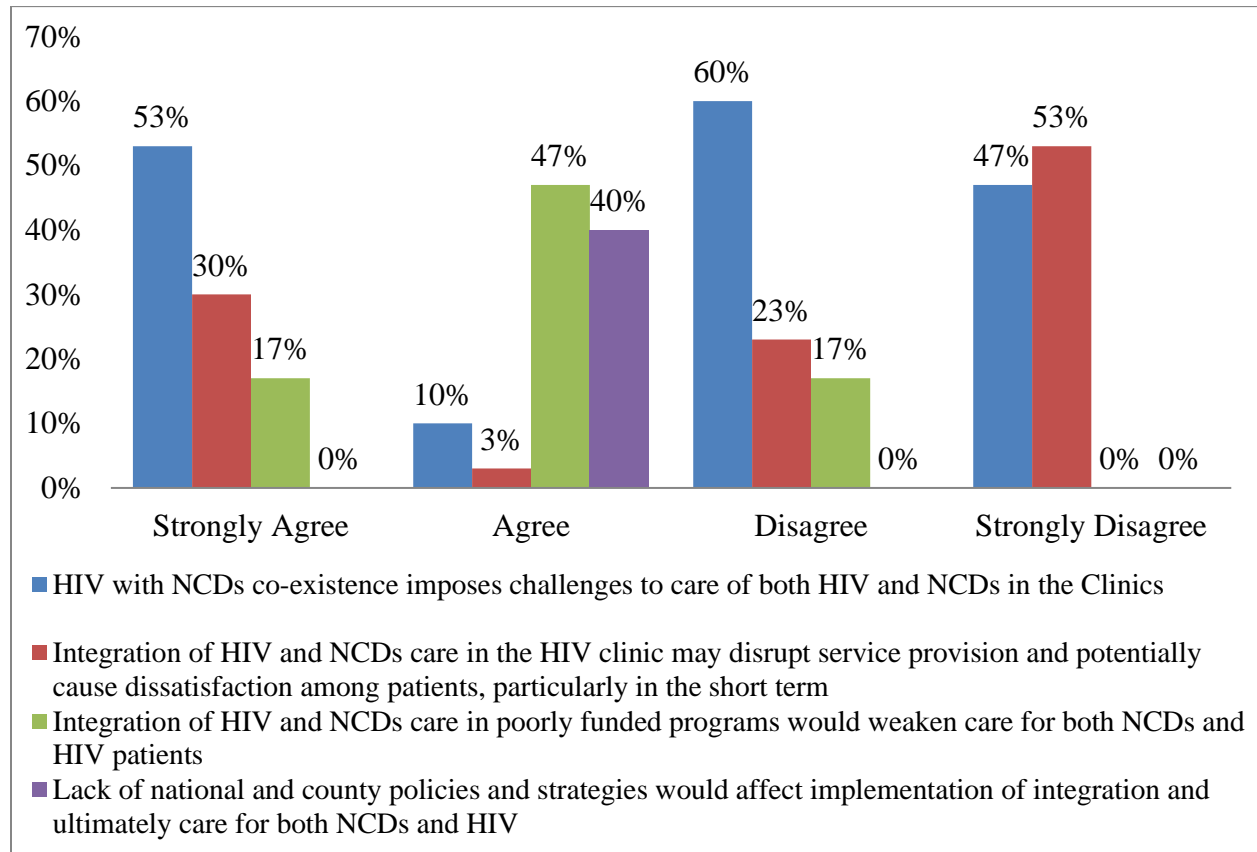
**Figure 3: Patient’s response on whether integration of HIV and NCDs will challenge NCDs and HIV care**



Clinicians on the other hand held an opinion that the integration of HIV and NCDs care services significantly causes challenges to care of both HIV and NCDs in HIV outpatient clinics. 53% of the clinicians agreed, and 30% strongly agreed that the

integration of HIV and NCDs care services is a barrier to effective service delivery in HIV outpatient clinics. Only 17% of the clinicians disagreed that the integration would create barriers to accessing HIV and NCDs care (See *Figure 4*).

**Figure 4: Clinician responses on whether integration of HIV and NCDs will challenge NCDs and HIV care.**

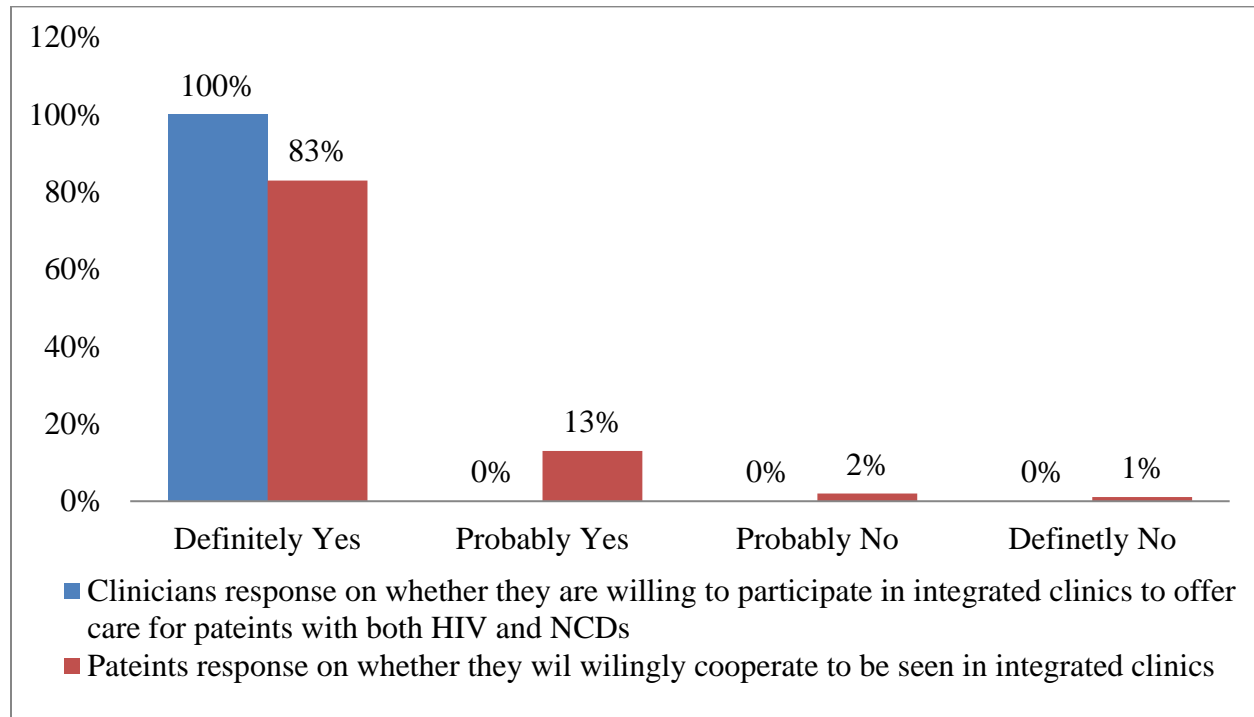


The third question examined in the study was whether clinicians and patients would be more willing to work and visit HIV outpatient clinics, respectively, following the integration of HIV and NCDs care services.

Both patients and clinicians showed overwhelming interest in attending and working respectively integrated clinics. 83% of the patients agreed they

would visit HIV and NCDs integrated outpatient clinics for HIV and NCDs care. Only 1% of the patients said they would not visit HIV and NCDs integrated outpatient clinics for HIV and NCDs care. On the other hand, all clinicians accounting for 100% agreed they would attend and work in integrated outpatient clinics to provide care for HIV and NCDs patients. (See *Figure 5*).

**Figure 5: Clinicians and patients’ willingness to work and be seen in the integrated clinic respectively.**



**DISCUSSION**

A similar study conducted in Zambia revealed that the integration of HIV and NCDs service provisions significantly benefited health outcomes (Okooboh & Olutayo, 2016). The integration in the context of Zambia improved equitable distribution of health care resources, reduced clinicians’ service duplication, reduced patients’ stigma, and enabled healthcare workers share the workload (Okooboh & Martins, 2016). The current study is in strong support of the Okooboh and Olutayo (2016) observations considering that 49.8% of the patients and 87% of clinicians interviewed agreed integration would improve HIV and NCDs care in HIV outpatient clinics. Other benefits of integrating HIV and NCDs care services include cost savings, assists fix lost wages, as well as out-of-pocket expenses, and moving from one clinic to the other to seek different services (WHO, 2016). In addition to cost-effectiveness, integration helps in the adoption of patient-focused approaches that promote the management and self-empowerment of patients with HIV and other diseases (WHO, 2018).

On the question of whether integration would create barriers to HIV and NCDs care, Okooboh and

Olutayo(2016); Hancock et al. (2011) provide an in-depth perspective on the same. Okooboh and Olutayo (2016) note that the integration of HIV and other diseases would lead to an increased workload for clinicians; hence, most likely to lower the quality of service rendered to HIV and NCDs patients. The study findings are in strong agreement with Okooboh and Olutayo(2016) since 44% of patients and 53% of clinicians interviewed agreed HIV and NCDs integration imposes challenges to HIV and NCDs care in HIV outpatient clinics.

Considering the extent of participation in an HIV and NCDs integrated clinic, respondents’ perceptions of integration benefits played a significant role. Of the patients, 83.6% showed interest in attending the HIV and NCDs integrated clinics. On the other hand, all the clinicians were willing to work in HIV and NCDs co-existing clinics. Okooboh and Olutayo (2016) argue that a reduction in waiting time to receive health care for both HIV and NCDs services enhances service delivery in outpatient HIV clinics.



**CONCLUSION AND RECOMMENDATION.**

The purpose of the study was to ascertain how patients and medical professionals felt about the integration of HIV and NCD care services. The main focus was on benefits, challenges, and the likelihood of attending and working in clinics. Most respondents perceived that the integration of HIV and NCDs care services would lower the frequency of visiting clinics, improve care for both HIV and NCDs in the HIV outpatient clinic, and enhance the cost-effectiveness of accessing quality health care. On the challenges, it was apparent that the integration of HIV and NCDs care services would lead to crowding and workload for patients and clinicians, respectively. Regardless of the challenges, both patients and clinicians were overwhelmingly interested in attending and working for co-existing HIV and NCDs HIV outpatient clinics, respectively.

The study recommends the need to integrate HIV and NCDs care services to ensure cost reduction, minimised travel from one clinic to the other, and improved access to quality health care for those living with HIV and NCDs.

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