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An Assessment of the Acceptance of Call to Care Services by HIV Positive Patients on Antiretroviral Treatment at Kabwata Clinic in Lusaka

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Abstract

Kabwata daily ART activity register shows that approximately 30 patients miss appointments weekly and out of which about 20 are lost to follow at month-end. With the support of the Ministry of Health and partners, the clinic has been striving to improve retention levels through the implementation of call-to-care services. However, it is important to assess the state and factors that could be affecting the effective implementation of call-to-care at the facility. This study assessed the acceptance of call-to-care strategy by clients on ART at Kabwata Clinic and has provided evidence-based information on acceptance of call-to-care services, which will help Kabwata Clinic and stakeholders improve the provision of antiretroviral services, which will eventually translate into retention and viral load suppression. A descriptive cross-sectional design was used. The population of the study was 5738, from which a sample of 374 participants was drawn using systematic random sampling and subjected to a questionnaire. Data analysis and presentation were performed with the aid of google forms. The study ensured ethical considerations were observed. The study revealed that the majority of respondents (60.7%) agreed to receive appointment reminders, (78.3%) agreed to discuss ART issues on phone, (78.8%) agreed that they were happy to receive calls from medical personnel about their health and lastly (69.3%) agreed that they are religious and free to be contacted about their health. Therefore, the study concluded that most adult ART patients at Kabwata Clinic have accepted call-to-care services and are willing to receive call-to-care services.

Keywords: *Assessment, Acceptance, Antiretroviral Treatment, Call-to-Care, HIV, Retention.*

Introduction

Zambia has a generalized HIV epidemic among adults aged 15-49 years, with more women (13.6 percent) than men (8.5 percent) living with the virus [1]. It is also one of the highest HIV burdens in Sub-Saharan Africa. In 2016, around 46 000 people became newly infected with HIV in Zambia (2). Treatment, care, and support in the context of HIV and AIDS encompass a continuum of actions and interventions at various stages, including Pre-ART, ART, TB/HIV co-infection, Viral Load Suppression, nutrition, and psychosocial support. The continuum includes activities that are conducted primarily in static health facilities combined with outreach to sites that bring services closer to people, as well as home and community-based activities that support the individual patient and facilitate the work of health workers based in health facilities. At the close of 2018, Zambia had over 1.2 million adults on ART. Studies have proven evidence that demonstrates that an individual on ART with a suppressed viral load is unlikely to transmit new infection of HIV. However, the challenge has been unacceptably high numbers of lost to follow-up resulting in intermittent stoppages of treatment. This results in viral load rebounds and contributes significantly to the spread on new infections of HIV.

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According to a study conducted in China by [3], Wireless communication technologies are increasingly being used in the fields of healthcare, with platforms such as mobile health being widely implemented in HIV care. The rapid expansion of mobile technologies, including smartphone applications, provides a unique opportunity to effectively remind patients about regular follow-up appointments, thereby ensuring patient retention and resulting in a higher quality of care for HIV patients.

Patient retention, defined as continuous engagement of patients in care, is one of the crucial indicators for monitoring and evaluating the performance of antiretroviral treatment (ART) programs. According to [4], ART retention in Zambia was 90.91%. This means that there was 9.09% of patients on ART who are lost to follow-up. Patient retention in care is one of the challenges of ART programs in many settings. ART programs have, therefore, been striving hard to identify and implement interventions that improve their suboptimal levels of retention.

Call to Care is one of the interventions identified and being implemented in most settings, including Kabwata Clinic, to improve the adherence and retention levels by ensuring that patients are communicated to via phone calls and messages, regarding laboratory, clinical, and pharmacy appointments and clients are able to contact the facility for any support required.

However, it is important to note that the protection of personal information was identified as the most important factor that must be addressed to increase patient willingness to use a cell phone reminder system. The findings suggested that mobile technologies are a widely used and acceptable method for improving the quality of care for HIV patients [5].

There has not been any study conducted at Kabwata clinic to assess the acceptance of the call to care services by HIV-positive patients on antiretroviral treatment. Therefore, it is with this highlighted background that this study was conducted with the objective of assessing the acceptance of call to care services by HIV-positive patients on antiretroviral treatment at Kabwata Clinic in Lusaka so as to determine the demand for the call to care services by Patients on HIV/AIDS treatment at Kabwata Clinic, determine the willingness and acceptance of patients to receive a call to care services, identify the factors associated with the acceptance of the call to care services by Patients on HIV/AIDS treatment at Kabwata Clinic and to explore measures that can be adopted by Government to improve and enhance call-to-care strategies.

Theoretical Framework

Self-denial Theory

Though ART contributes to stigma reduction, some HIV-positive people feel reluctant to visit health clinics for fear that doing so could reveal their HIV status. They fear confidentiality breaches by health practitioners or of being seen queuing for ART-related services, which could instill feelings of shame. These fears could be particularly influential for those who had not fully accepted their HIV status and who can be described as living in self-denial [6].

Those that have been diagnosed with HIV may live in denial, and this can worsen their problem if they do not have access to ART in the absence of care. Individuals' acceptance of their HIV diagnosis and their sense of hope and belief for living with HIV must be emphasized through social support and encouragement, which can be achieved through disclosure.

Evidence from studies shows that periods of non-acceptance of the HIV-positive status can range from months to years and could have marked negative consequences for many individuals' mental and physical health. This state of denial can be a significant barrier to accessing treatment, care and support. [7].

According to [8], a mindset shift among patients is needed as well so that they can be consistent in taking their medication for HIV/AIDS. The presence of community health workers in each township may help change

mindsets by making patients see that the health system is addressing their immediate needs. This calls for regularly communication and interaction with the patients in order to create trust and a personal relationship between clients and health workers.

Perception Theory

According to [9] non-acceptance is a problem of wrong perception and fear of stigmatization. It is described as a barrier to the disclosure of HIV status as the disbelief, perceived stigma, and fear of negative judgement may force the HIV-infected individuals to hide their positive results. Disclosure is required to help the process of acceptance and support engagement in care and receiving treatment. Thus, clearing the misperception and fear of stigmatization enables access to social support, reassurance, and encouragement, including for treatment initiation decisions, clinic visits, and treatment reminders.

Behavior Reinforcement Theory

Behavior reinforcement theory argues that if individuals link their behavior with positive rearwards, then they will continue with that rewarding behavior [10]. So continuous counselling to reinforce the client's positive behavior is necessary to achieve positive treatment outcomes. It follows therefore that those who receive continuous adherence counselling will continue to receive ARVs without interruption because they understand the value and health benefit of uninterrupted ART medication. One of the most important benefits is being the ability to attain good physical and psychological health and being able to engage in productive economic and social activities just like any other person. In fact, it is not even possible to tell the difference between an HIV-positive and none HIV positive person unless one chose to disclose it.

Communication Theory

According to [11] communication between clinicians and HIV patients is a multidimensional concept and involves the content of the dialogue, the affective component (i.e., what happens emotionally to the physician and patient during the encounter), and nonverbal behaviors.

In the call-to-care service, communication skills are a key to achieving the important goal of persuading the patient to adhere to their treatment regime [11]. These goals include the following.

1. Gathering information from the patient and the patient's family.
2. Establishing trust and rapport.
3. Giving good and bad news and other information about the illness.
4. Addressing patient emotions.
5. Eliciting concerns.

Effective and supportive communication can assist the HIV /AIDS patient and his or her family in following a successful treatment program. Moreover, the need for truly informed consent and the patient's right to health care information and compassionate care create ethical, legal, and humanistic mandates for competency in oncology communication [12].

Technology Adaptation Model (TAM)

According to the Technology adaptation model by [13], people's willingness to adopt the latest technology is influenced by the ease of use of technology. Information technology can help health officials in the execution of call-to-care services. For example, they can harness the power of mobile phones to collect data and manage operations in individual facilities relating to HIV-positive patients. IT could also significantly improve the system's supply chain to ensure that adequate amounts of ART drugs and associated equipment are available when needed.

Statement of the Problem

Kabwata clinic is one of the many government health facilities in Zambia that offer ART services. According to [14], Kabwata ART patient retention was 98%. However, the Kabwata daily ART activity register shows that

approximately 30 patients miss appointments weekly and out of which about 20 end up being lost to follow-up at the end of the month.

According to [4], the ART retention in Lusaka urban district is currently at 88.35%, and the ART retention in Zambia is 90.91% which is lower than the expected standard for retention (95%).

With the support of the Ministry of Health and its partners, the clinic has been striving hard to ensure all clients are retained on care through the implementation of the call-to-care services (C2C) as a key strategy for enhancing retention and improving adherence levels as well as developing community adherence groups.

A study conducted in Zambia by [15] shows that most young people are willing to use MHealth, and with the growing access to mobile phones and the internet, mHealth-based solutions may play a vital role in providing YPLHIV with information, psychosocial support, and by reducing time spent at health facilities leading to not only improved health outcomes but possibly also cost and resource benefits via task-shifting, education, and more effective use of clinical appointments.

Another study conducted in China [3] shows that wireless communication technologies are increasingly being used in the fields of healthcare, with platforms such as mobile health being widely implemented in HIV care and the rapid expansion of mobile technologies, including smartphone applications, providing a unique opportunity to effectively remind patients about regular follow-up appointments, thereby ensuring patient retention and resulting in a higher quality of care for HIV patients. The study also revealed that the protection of personal information was identified as the most important factor that must be addressed to increase patient willingness to use a cell phone reminder system.

With this background, it is important to assess the acceptance of call-to-care services and thereafter address factors that could be affecting the effective implementation of call-to-care services at the facility. It is with this background that this study endeavored to assess the acceptance of call-to-care strategy by clients on ART at Kabwata Clinic in Lusaka.

Justification

This study is important to the ART patients at Kabwata clinic because evidence of effective use and acceptance of Call-to-Care will reduce intermittent stoppages of treatment and ensure positive health outcomes for those on treatment. The results from the study will enable health systems to scale up the patient's use of call-to-care services through sensitization and awareness of the importance of using the C2C services.

Overall, the study will contribute to the improvement of the Health System (Kabwata Clinic, Policy makers, Ministry of Health, and other stakeholders) in the provision of antiretroviral services to clients, which will eventually translate into improved retention and better treatment outcomes such as viral load suppression.

This study is important to the scientific world because it has provided evidence-based information on the acceptance of call to care services by HIV positive patients on antiretroviral treatment at Kabwata Clinic in Lusaka.

Purpose of the Study

The study provided evidence-based information on the acceptance of call to care services by HIV-positive patients on antiretroviral treatment at Kabwata Clinic in Lusaka. The study results are helping Kabwata Clinic, Policy makers, the Ministry of Health, and other stakeholders on how to improve the provision of antiretroviral services to clients, which will eventually translate into retention and treatment outcomes such as viral load suppression.

Study Limitations

Some of the respondents withheld some information despite the explanation that the

study was going to ensure that the information shared was confidential. Some of the reasons given were:

1. Too many studies had been conducted at the same time leading to respondent fatigue and unwillingness to answer all questions.
2. All research assistants in charge of data collection contracted COVID 19 and could not work for three weeks.

Materials and Methods

Study Design

This study adopted a cross-sectional descriptive design which provided a picture of the situation or phenomenon being explored. The study assessed the acceptance of call-to-care services by HIV-positive patients on antiretroviral treatment in Zambia with a case study of Kabwata Clinic in Lusaka.

Sample Design

The study population was 5,738 adult patients above 15 years who are currently on antiretroviral treatment at Kabwata clinic. This population was used as the sampling frame while the following formula determined the sample size.

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

Where n is the sample size, N is the population size and e is the margin of error which is the 95% confidence level (0.05).

Therefore,

n=374.

$$n = \frac{5738}{1} + (5738)(0.05)^2$$

n=374 respondents

Therefore, the sample size was 374.

The sample included 374 adult patients (above 15 years) who are on ART at Kabwata Clinic.

Sampling Strategy

The researcher employed the systematic random sampling method to choose the patients who were included in the sample. The sampling procedure used the factor K, which is 15 as the interval. This meant that all the 5,738 patients in the ART register had an equal opportunity of being sampled as every Kth was selected to be part of the sample.

Data Collection

The researcher collected data using structured electronic questionnaires (google forms) which were administered to respondents at Kabwata Clinic for clients with appointments within the data collection period and remotely for clients with no appointments within the data collection period.

The researcher collected the data from 5 community health workers from the facility who were oriented on data collection processes and procedures. The questionnaire was translated from English to Bemba and Nyanja by a specialist in the respective languages for respondents who only understood the respective languages.

Data Processing and Analysis

The data processing, analysis and presentation was performed with the aid of google forms. The qualitative data regarding the views and opinions of respondents was analyzed by utilizing content analysis and thematic analysis (Kothari, 2014).

Ethical considerations

The researcher ensured safeguards were in place to protect study participants in terms of respondent's views and confidentiality. This was achieved by firstly informing the respondents of the study's intent, then respondents were informed of their right to withdraw at any time during the study.

Further the respondents were also informed of the anonymity and confidentiality of the data that they presented. The researcher requested approval from the Texila American University, ERES Ethics Committee, National Health Research Authority as well as the Ministry of Health to carry out the study.

Results and Discussion

The characteristics of the respondents in this study include gender, age, highest qualification, occupation, and period on treatment.

Figure 1 shows the summery of the respondent's gender. The results show that most respondents, 69.9% were female.

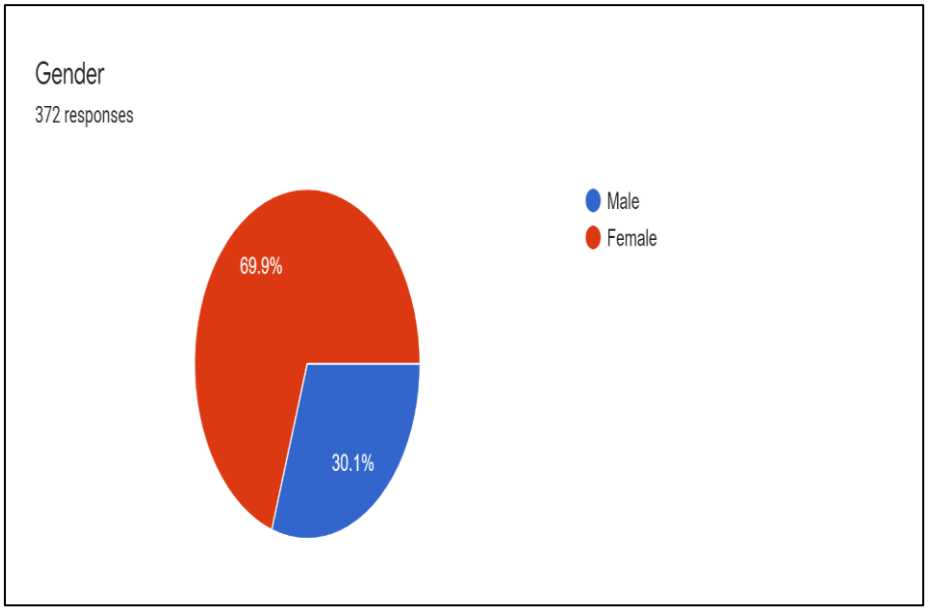

Figure 1. Summery Respondent's Gender

Source: Study Data

Figure 2 shows the summery of the respondent's ages. The results show that the majority of respondents (35%) were between 35-44 years old, and the minority were above 65 years old.

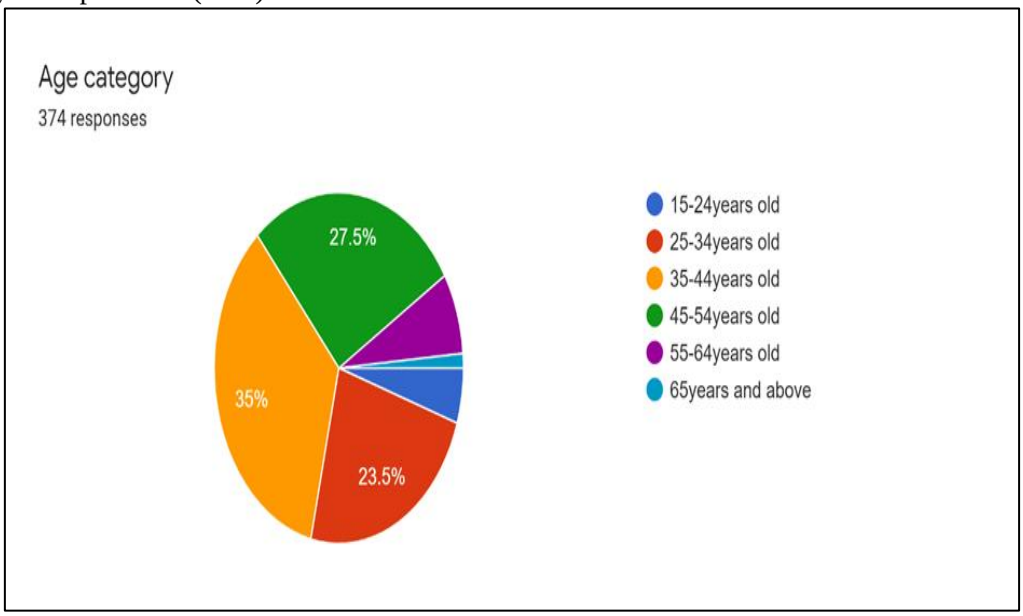

Figure 2. Summery of Respondent's Age

Source: Study Data

Figure 3 shows the summery of the respondent's qualifications. The results show that most respondents (61.5%) were certificate and diploma holders, followed by (38.2%) who had no qualification.

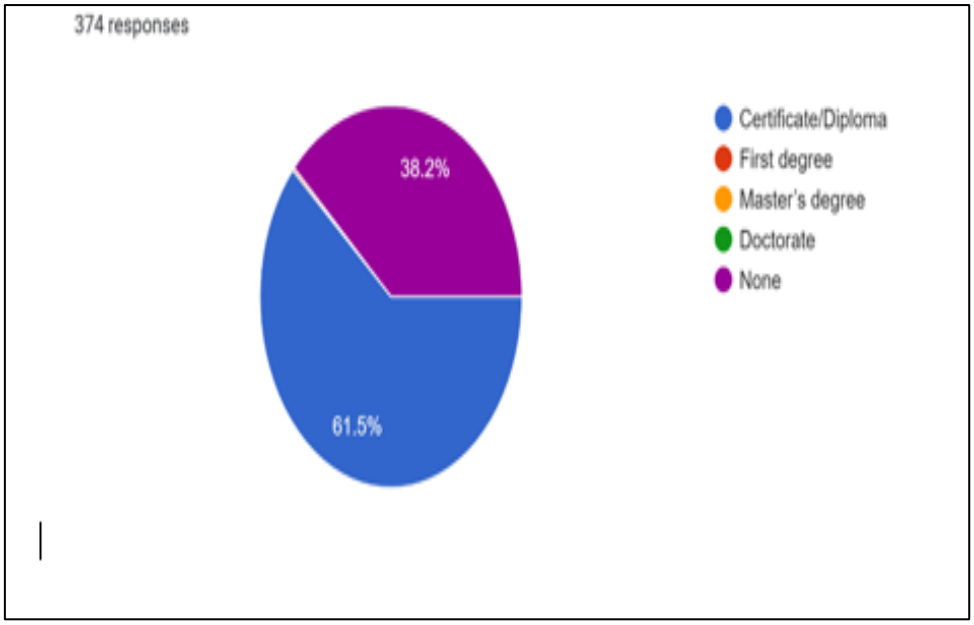

Figure 3. Summery of Respondent's Qualification

Source: Study Data

Figure 4 shows the summery of the respondent's occupation. The results show that the majority of respondents (15% and 13.1%) were businesswomen.

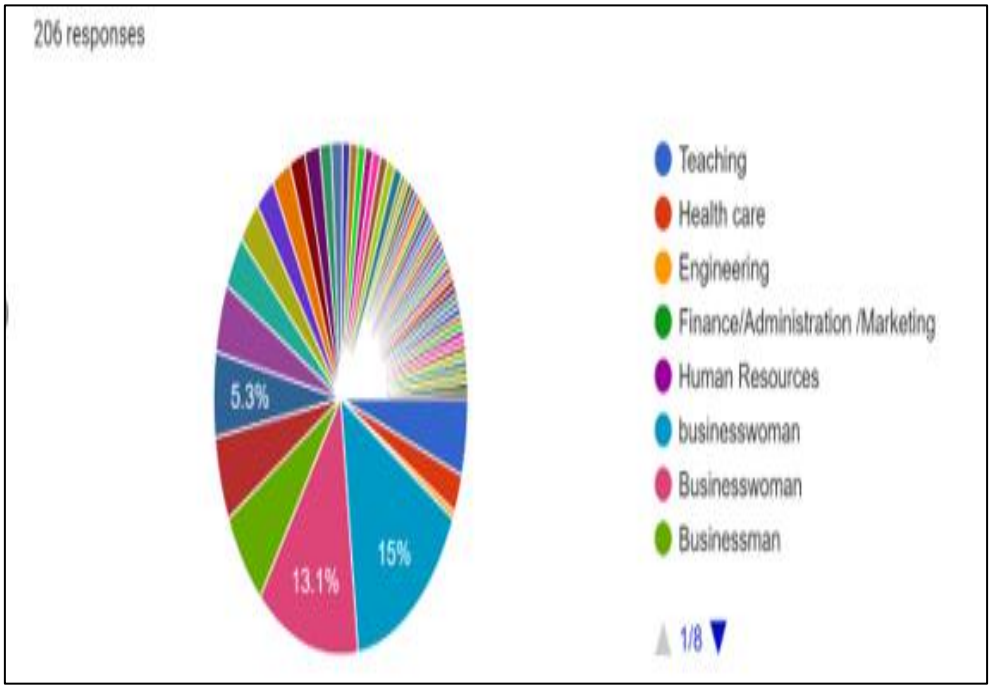

Figure 4. Summery of Respondent's Occupation

Source: Study data

Figure 5 shows the summery of the respondent's period on ART. The results show that most respondents (62.6%) had been on ART between 5-10years while the minority (14.1%) had been on treatment between 10-15years. There was no respondent who was on treatment above 15 years.

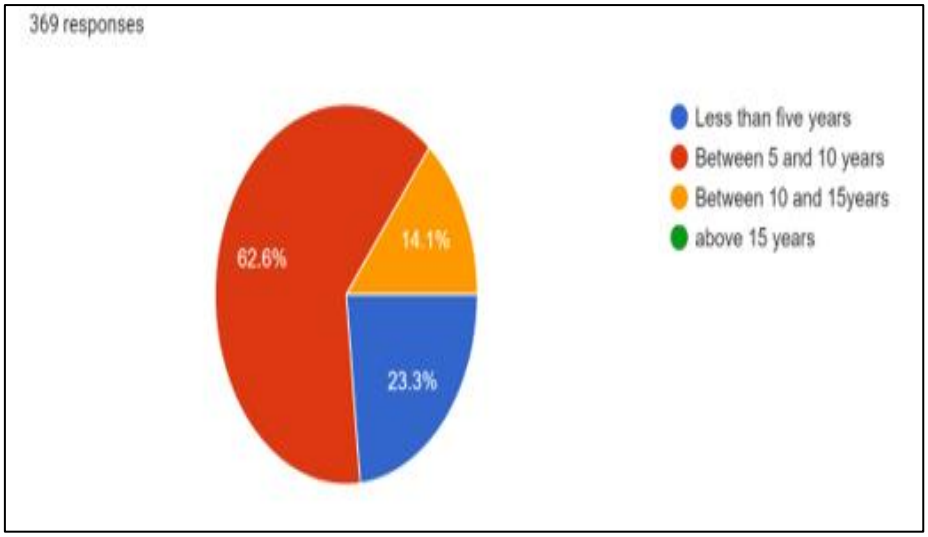

Figure 5. Summery of Respondent's Period on ART

Source: Study Data

Demand for Call to Care Services by Patients on HIV/AIDS Treatment at Kabwata Clinic

Figure 6 shows the summery of the respondent's possession of a mobile phone. The results show that most respondents (98.9%) had mobile phones. The results revealed in this study are also seen in the study done by [16]. The study reviewed that a total of 415 (98 % response rate) respondents participated in the interview. Most respondents, 316 (76.1 %), owned a cellphone.

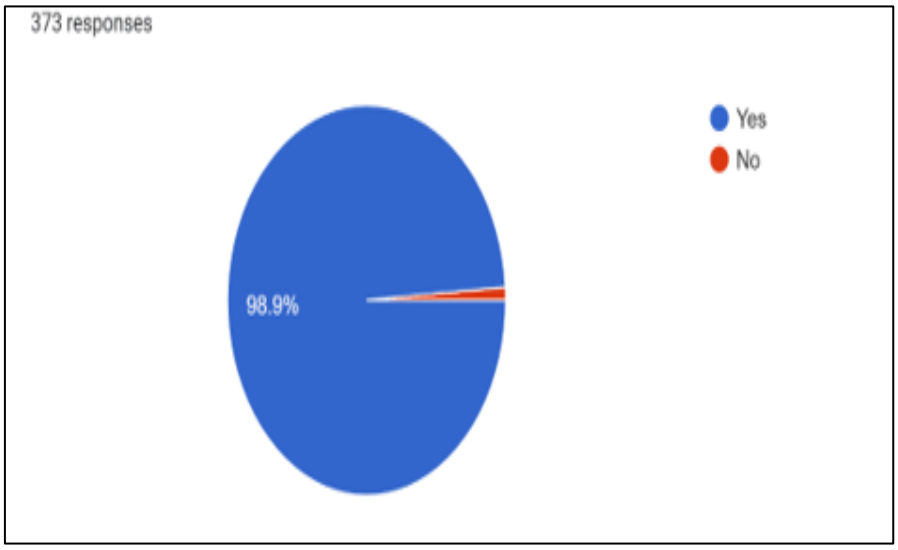

Figure 6. Summery of Respondent's Possession of Mobile Phone

Source: Study data

Figure 7 shows the summery of respondent's use of Call to Care Services. The results show that the majority of respondents (51.9%) use of call to care services was low. This is followed by (47.3%) of respondents whose use of Call to Care services was moderate, and lastly, the minority of respondents (0.8%) whose use of Call to Care services was high.

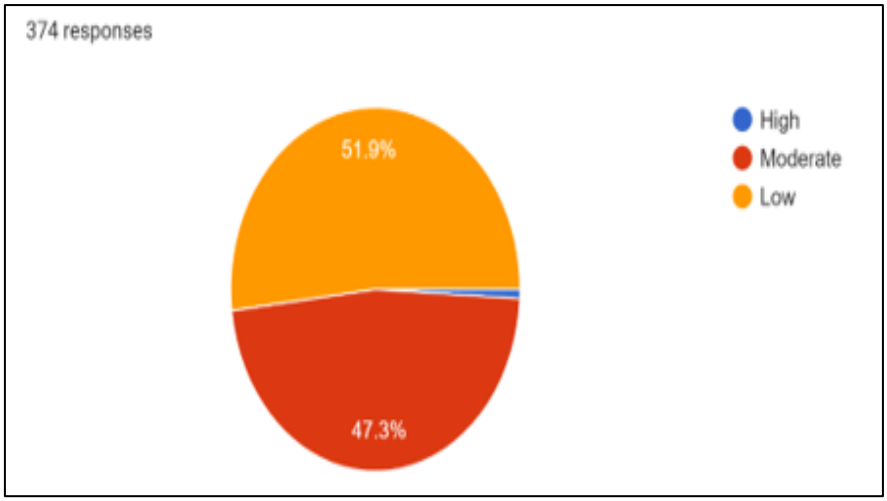

Figure 7. Summery of Respondent's Use of Call-to-Care Services

Source: Study Data

Figure 8 shows the summery of respondents' need for Call to Care Services. The results show that most respondents (70.1%) indicated that their need for call to care services was moderate, followed by (22.9%) of respondents whose need was low and lastly (7%) whose need was high.

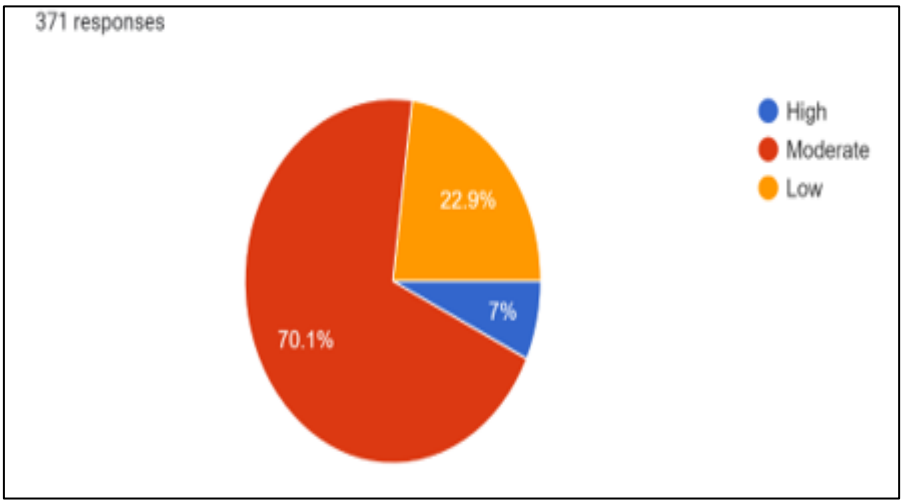

Figure 8. Summery of Respondent's Need of Call-to-Care Services

Source: Study Data

The Willingness and Acceptance of Call to Care Services by Patients on Antiretroviral Treatment at Kabwata Clinic

Figure 9 shows the summery of respondents' willingness and acceptance of Call to Care services by patients on antiretroviral treatment at Kabwata Clinic. The results show that the majority (60.7%) agreed to receive appointment reminders, (78.3%) agreed to discuss ART issues on phone, (78.8%) agreed that they were happy to receive calls from medical personnel about their health and lastly (69.3%) agreed that they are religious and free to be contacted about their health.

The results of this study agree with a study by [16] which revealed that most respondents 161(50.9 %) were willing to receive text message medication reminders.

Figure 9. Summery of Respondent's willingness and acceptance of call to care services by patients on antiretroviral treatment at Kabwata Clinic

Source: Study Data

Factors Associated with the Acceptance of Call to Care Services by Patients on Antiretroviral Treatment at Kabwata Clinic

Figure 10 shows the summery of factors associated with the acceptance of call to care services by patients on antiretroviral treatment at Kabwata Clinic. The results show that the majority, 352 out of 374 respondents (94.1%) disagreed to not liking strange calls,346 out of 374(92.5%)disagreed to not being able to read and write massages, 371 out of 374 (99.2%) disagreed to loss or lack of phone, 371 out of 374 (99.2%) disagreed to not having the facility contact details, 372 out of 374 (99.5%) disagreed to not getting response from the facility when they call, 374 out of 374 (100%), disagreed to providers having bad attitude and lastly 246 out of 374 (65.8%) disagreed to fear of accidental status disclosure. It is also important to note that 128 out of 374 (34.2%) agreed to fear of accidental status disclosure.

Some of the results revealed on this graph are seen in the study done by [16], which showed that associated factors to the willingness were the following: having secondary or higher education, using the internet, not disclosing HIV status to anyone other than HCP (Health Care Provider), not answering unknown calls, use of cellphone alarm as a medication reminder.

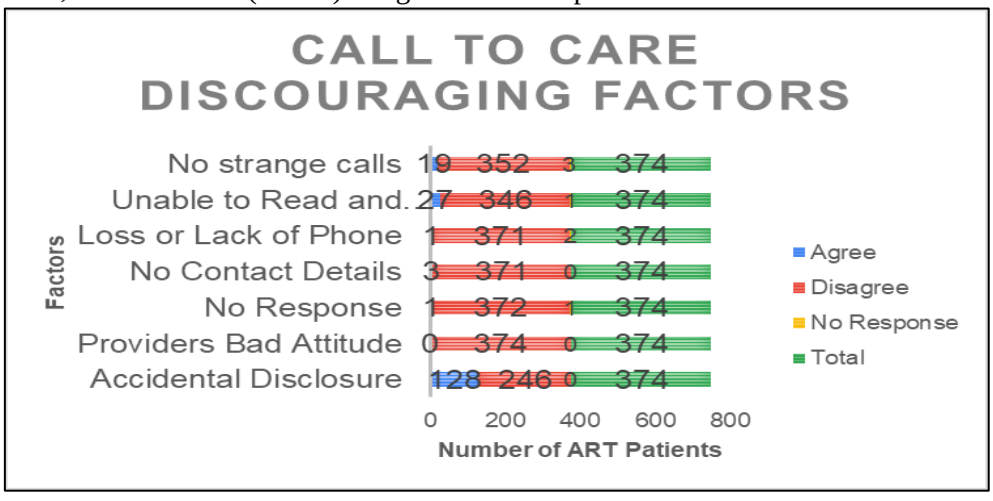

Figure 10. Summery of Factors Associated with the Acceptance of Call to Care Services by Patients on Antiretroviral Treatment at Kabwata Clinic

Source: Study Data

Measures for Enhancing Call to Care Service

Figure 11 shows the summery of measures for enhancing Call to Care services, and the results show that out of 374 respondents, a majority of 337 (90.1%) had no recommendations. Other recommendations were the facility to call and avoid text messages to avoid accidental disclosure (6.7%), The facility to provide more phones to the adherence team to avoid call traffic (1,9%), and The Facility to text only to accommodate patients that cannot pick calls while at work (0.5%), The facility to continue providing the call to care services (0.5%), The facility to provide 24/7 Call to Care services (0.2%).

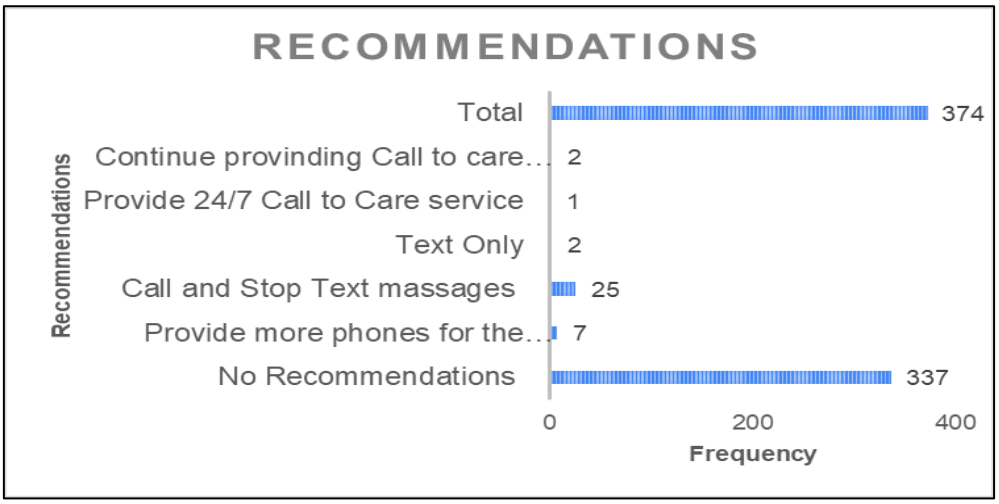

Figure 11. Summery of Measures for Enhancing Call to Care Services

Source: Study Data

Conclusion

Therefore, the study concluded that the state of acceptance of Call to Care Services by HIV-positive patients on antiretroviral treatment at Kabwata Clinic is high as the majority of respondents were willing and accepted Call to Care Services. Most adult ART patients at Kabwata Clinic own mobile phones. Unfortunately, the use of call-to-care services by adult ART patients at Kabwata clinic is low, while the need for call-to-care services by adult ART patients at Kabwata clinic is moderate. This means that even if the use of call-to-care services is low, most patients recognize their need to use the services. This is in line with the results revealed in this study showing that most adult ART patients at Kabwata Clinic have accepted call-to-care services and are willing to receive call-to-care services.

Factors such as strange calls, not being able to read and write messages, lack and loss of phone, not having the facility contact details, not getting a response by facility staff and fear of accidental disclosure have no discouraging effect on the use of call to care services by most adult ART patients at Kabwata Clinic. Recommendations for enhancing Call to Care services were; the facility to call and avoid text messages to avoid accidental disclosure, the provision of more phones to the adherence team to avoid call traffic, and the facility to text only to accommodate patients that cannot pick up calls while at work, provision of call to care services to continue, and provision of 24/7 Call to Care services.

Recommendations

Based on the conclusions, the following recommendations have been made. The facility to scale up the use of Call to Care services by frequently sensitizing the ART patients the on the availability and importance of the service. The facility to take advantage of the high level of willingness and acceptance of patients to receive Call to Care Services. The facility to

personalize the provision of the service to accommodate the individual needs of the patients by inquiring from them on the appointment days.

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Conflict of interest

There is no conflict of interest.

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