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Patient Satisfaction and Perceptions Regarding Anti-Retroviral Therapy (ART) Services in Rural Southwestern Uganda

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Abstract

Background: Patient satisfaction and perception of the healthcare services received contribute to compliance with treatment guidelines, retention in care, and adherence to recommendations. This is especially so in the treatment of chronic medical conditions such as HIV/AIDS. The success of antiretroviral therapy (ART) plays a fundamental role in determining the quality of life of people living with HIV/AIDS (PLWHAs). However, although the majority of global ART services are being offered in low-income countries in sub-Saharan Africa, the available literature on satisfaction and perception on ART services is mainly from developed countries. This paper describes the perceived patient satisfaction and perceptions of ART services offered in rural southwestern Uganda.

Methods: A cross-sectional study using qualitative and quantitative methods was conducted at Nsiika Health Centre (H.C.)-IV among 135 people living with the Human Immuno-deficiency Virus (HIV). A researcher administered a questionnaire and 13 in-depth interviews were used to collect the data. The 135 participants were randomly sampled and convenience sampling was used for the participants for the in-depth interviews. We used descriptive statistics for the characteristics of the participants and thematic analysis for the qualitative data to generate four themes and 27 subthemes.

Results: Majority of the participants (51.9%) were female; 45.2% had no formal education and were subsistence farmers (81.4%). The patients perceived healthcare workers as having positive attitudes, quality services/skills, and involving them in decision-making for their care. The age range of respondents was 18-50 years, and 71.1% were married. Overall, the participants were satisfied with ART services and had positive perceptions towards ART services, especially privacy (54.8%), good clinical competencies (50.37%) and quality of healthcare (38.5%). More than half of the participants (56.3%) said they would recommend the health facility to their family and friends.

Conclusion: Overall, the participants were satisfied and had positive perceptions about ART services. Continuous assessment of satisfaction and perceptions is recommended to ensure retention in the ART services.

Keywords: Patient Satisfaction, Perception, ART services, HIV/AIDS

Introduction

Patient satisfaction is an indication of a patient-centred healthcare system. In addition, patient satisfaction with services is an important performance and outcome measure

of the healthcare system [1]. However, different definitions of satisfaction in the literature makes its measurement challenging. For example, Ahmed et al. [2] defines patient satisfaction as "representation of attitudes towards care or aspects of care". Mohan et al. [3] describes patient satisfaction

as “patients’ emotions, feelings, and their perception of delivered healthcare services.” Lack of consensus in literature leaves the concept of patient satisfaction in the healthcare system complex. This makes the measurement of agreeable satisfaction even more challenging. For example, satisfaction represents attitudes towards care [2], patients’ emotions, feelings and their perception of delivered healthcare services [3,4], a degree of congruency between patient expectations of ideal care, and their perceptions of real care received [2]. It is important to note that patient satisfaction and perception reveals patient involvement in the patient centre care and decision-making [5]. Lack of satisfaction could affect patients’ compliance to treatment guidelines, adherence to recommendations of the healthcare, and retention in care.

People living with HIV/AIDS (PLWHA) need satisfaction and positive perceptions toward antiretroviral therapy (ART) services to ensure adherence to treatment, retention in care and their wellbeing [6-8]. Understanding patient satisfaction and perception of ART services are important in implementing services that improve the quality of life for PLWHA [9]. The increasing number of patients on ART services requires moving the services to the community to facilitate accessibility [10]. However, since the community-based process of care was rolled out in all health Centre IV’s in Uganda, there is a dearth of information on about patient satisfaction and perception of ART services in the study area. The available literature on satisfaction and perception on ART services comes mainly from developed countries, while the majority of global ART services are being provided to PLWHA in low-income countries in sub-Saharan Africa. Hence the research should follow where the greatest disease burden exists. This study sought to determine the extent of satisfaction and perception of patients receiving ART services at Nsiika HC-IV in southwestern Uganda.

Materials and Methods

Study setting

Data were collected from Nsiika health centre IV in Buhweju district found in Southwestern Uganda about 70.7 km northwest of Mbarara city. The health facility serves as a training site for health professional students during community placements. The centre offers preventive, curative, and specialized services including ART clinic. The study participants were recruited from the ART clinic.

Study design

This was a cross-sectional study using both qualitative and quantitative methods to identify aspects of phenomena of patient satisfaction with ART services in healthcare facilities [11]. The researchers collected data to generate statistics describing participants’ characteristics and ratings regarding satisfaction and perceptions of care. The Qualitative inquiry enriched the quantitative data to illuminate the perception of the participants receiving ART services. Data were collected

over a period of four weeks, from 29th July to 16th August 2020.

Study population/participants

Adults seeking ART services at Nsiika health centre IV in Buhweju district, rural southwestern Uganda. The health facility schedules for approximately 354 patients monthly according to facility records.

Sample size estimation

The quantitative sample size was arrived at using Kish -Leslie (1965) formula [12].

$$N = Z_{\alpha}^2 P (1 - P) / \delta^2$$

Where N= sample size estimate of adults attending ART clinic at Nsiika HCIV.

P= assumes 50% of patients would report being satisfied with the services

1-P = the probability of not attending ART clinic, so 1-P = 50%

Z α = Standard normal deviate at 95% confidence interval corresponding to 1.96

δ = Absolute error between the estimated and true population prevalence 5%.

The calculated sample size $N = 1.96 \times 1.96 (0.5 \times 0.5) / 0.05^2 \times 2 = 192$ HIV-positive adults

The sample size for the qualitative interviews were determined by a principle of redundancy where additional sampling did not yield new information [13]. According to researchers [14-16], 6 to 14 participants may be enough for semi-structured interviews; this study had a sample of 13 participants because no additional participant yielded new information or themes as observed in the data [17].

Sampling and data collection

Quantitative method; random sampling was employed to recruit participants to answer the research question for this study [18]. Patients who had visited the ART clinic for at least two times from the date of enrollment and were eighteen years and above were recruited. Participants for the qualitative interviews were recruited from the quantitative respondent sample with simple convenience sampling [13] until the required sample was achieved.

Data collection methods and tool

The researcher-administered questionnaires and a semi-structured interview guide were modified with guidance from mentors, HIV/AIDS experts and available scientific evidence and literature on ART services [19]. The content validity was achieved through adaptation and modification of the tool [20]

to suit the local setting and study area. Modifications to the tools were made based on the feedback and the findings from the pre-test. Two questions were reworded and two removed from the questionnaire to suit the services provided at the healthcare facility where the study was being conducted. The health centre IV has no services such as Walk-in /Urgent care, pediatrics, women health and counselling therapy. A pre-test of the questionnaire was done using patients in another site to ascertain face validity. The questionnaire was translated into the local language Runyankore and through the same translation and back translation process into English.

A survey of patient satisfaction regarding ART services was done using a researcher-administered questionnaire that was more feasible in terms of cost and time [18]. The satisfaction of patients receiving ART service questions were aimed at assessing patients' self-reported frequency of satisfaction. The questionnaire was structured into four sections: social demographics, general patient information, scheduling appointments, nursing care, lab, and other staff services section. Although Health Centre IV's have doctors and staff, no doctors were involved in the ART clinic; the patients are seen by only nurses and counsellors. The study employed 24 questions of mixed type including Likert scale items and closed ended questions. The Likert scale items were recorded on a five-point scale (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree).

Face-to-face interviews using a semi-structured interview guide were used to obtain qualitative data on the participants' perception of ART services. This method was chosen because it allows the researchers' to explore the research question in depth [13]. The questionnaire and the interview guide were translated into local language, Runyakole and back translated to English to ensure credibility and clarity of the data collection tools.

Quantitative data collection

Out of 192 potential participants, 135 respondents completed the questionnaire. The response rate of 70% during the time of data collection was attributed to a number of factors; longer return period, COVID-19 pandemic and one patient collecting drugs for others. The clinic provides patients with drugs for one to three months depending on the patient stability. This is in line with the recommendation of WHO and Uganda Ministry of Health (MOH) guidelines of stable patients to be seen 3 to 6 times per year [21]. In addition, the clinic has a system in place where patients coming from the same direction, who have no complaints, and are stable collect their neighbors' ART treatment books for drug refill and give to one patient who brings all the books to the clinic. The patient representing their neighbors is supplied the medication and in turn they distribute the medications with the treatment books back to the owners who remained at home. This is done in turn to cut on the high costs of transport to the clinic.

Patients receiving ART services were purposefully selected to participate in the study. Those who met the eligibility criteria were invited to participate in the study. The principal investigator explained the study objectives and procedures and obtained consent. A unique number code was then assigned to each questionnaire. The time to complete the questionnaire ranged from 15 to 25 minutes. For those who could not read or write, the researcher read the translated version in Runyankore and completed the chosen response.

Qualitative data collection

Individual in-depth semi-structured interviews were conducted face to face with participants who were able to describe their perception of ART services they receive at Nsiika Health Centre IV. The interviews were held in a tent outside the room in the compound where they receive their care services. This enabled the participants to talk freely without fear. The researchers first confirmed that informed consent to participate in the interview and consent for audio-recording had been obtained. Audio recording of the interview was done while the researchers took notes during the interview. The interviews focused on patients' perceptions of the ART services at Nsiika health centre IV. Interviews lasted between one to two hours [22] and data collection continued until saturation point [22].

Data management

Completeness and accuracy of recording in each data tool was assessed immediately before leaving study site and any missing data were corrected by cross-checking with the participant/respondent and research team where possible. To achieve inter-observer reliability the research team received training for one day about how to recruit the study participants/respondents, use the questionnaire, and conduct interviews. For the qualitative data; the four criteria of credibility, transferability, dependability and conformability were used to establish trustworthiness of the data [23]. The researchers were trained in data collection; the questionnaire guide was pretested in another site. Mentors had regular debriefing sessions with the researchers. The prolonged engagement with the participants for three weeks and translating the data collection tool in the local language ensured credibility of the data. To ensure dependability we kept a draft of the study protocol and documented the track record of the data collection process and established an audit trail. To ensure conformability of this study we triangulated the methods and the data collection techniques, employed reflective weekly meetings with the mentors; to ensure that the results were authentic, corroboration was employed where some participants reviewed the transcription to ensure that what was documented reflected their views. To ensure transferability purposive sampling was employed to recruit the participants who meets the inclusion criteria, data collection was determined by saturation point.

Data analysis

Quantitative data were checked for completeness of the responses in the field. Quantitative data were singly entered into the Microsoft Excel spreadsheets and then imported into SPSS, version 20 IBM.

Qualitative data analysis was ongoing during and after the fieldwork. This enabled the incorporation of issues arising such as distance from their homes, transport cost to ART clinic and communication with the healthcare workers into subsequent interviews. Thematic content analysis was used [24]. Organizing the data involved familiarization of the data by reading and re-reading the narratives of participants to understand the data as a whole. This was followed by identifying segments/phrases related to the patients' perception regarding ART therapy. Reading line by line and phrases of similar meaning, differences, and contradictions were identified and coded to ensure anonymity. Key concepts were identified and merged into subthemes and themes. The recorded audio will be kept for another three years on computer with a protected password.

Ethical considerations

Ethical clearance was obtained from Mbarara University of Science and Technology-Research Ethics Committee (MUST-REC) no. 38/02-20. The study used MUST-REC consent form format. Research clearance was obtained from Uganda National Council of Science and Technology (UNCST). No.RESCLEAR/01. Informed consent was obtained, privacy and confidentiality ensured throughout the study period.

Results

Quantitative results

The age range of respondents was 18 to 50 years, slightly more than half, (52%, 70/135) were females, and 71.10% (96/135) of the respondents were married. Most respondents had no formal education (45.19%, 61/135) and were subsistence farmers (81.4%, 110/135) (**Table 1**).

	Frequency (n)	Percentage (%)
Age (years)		
18-35	53	39.26
36-50	53	39.26
≥ 51	29	21.48
Gender		
Male	65	48.10
Female	70	51.90

Marital status		
Married	96	71.10
Single	7	5.20
Others (divorced/widowed/cohabited)	32	23.70
Educational status (specify)		
No formal education	61	45.19
Primary	51	37.78
Secondary	20	14.81
Tertiary/university	3	2.22
Occupation		
Subsistence farmer	110	81.4
Homemaker	7	5.2
Small scale traders	15	11.1
Formal employment	3	2.2

Most respondents interviewed (38.52%) rated quality of health as good followed by very good (25.19%). Most of the respondents (n = 74, 54.81%) rated their privacy at the ART clinic as good followed by very good (n = 52, 38.52%). The frequency of visits to the facility ranged between 2 and 5 visits (n = 96; 71.11%) and mainly occurred at the ART clinic (n = 105; 78.52%) (**Table 2**).

Characteristic	Frequency (n)	Percentage (%)
Quality of health		
Very good	34	25.19
Good	52	38.52
Average	31	22.96
Poor	18	13.33
Privacy		
Very good	52	38.52
Good	74	54.81
Average	7	5.1
Poor	2	1.48
Frequency of visits to facility per year		
2-5	96	71.11
≥ 6	39	28.89
Frequency of visits to ART clinic		
2-5	105	78.52
≥ 6	29	21.48

The majority ($n = 105, 77.8\%$) of the respondents scheduled appointments by return dates. Most, 45.2% ($n = 61$) of the respondents' waiting time to speak to the schedule staff was more than seven minutes, followed by 5 to 7 minutes ($n = 34, 25.19\%$) and 3 to 5 minutes ($n = 30; 22.22\%$). However, 30.37% of respondents ($n = 41$) had neutral views regarding the concern and help of the schedule staff, and this was followed by agree ($n = 37; 27.41\%$) and strongly agree that the staff show concern ($n = 36; 26.67\%$). The majority of the respondents ($n = 106, 78.52\%$) come to the ART clinic on their appointment date and the waiting time at the reception ranged between 21 and 40 minutes ($n = 41; 34.81\%$), followed by 5 to 20 minutes ($n = 39; 8.89\%$) and longer than 41 minutes ($n = 38; 28.15\%$). The reported time spent in the examination room was most frequently 21 to 40 minutes ($n = 61; 45.19\%$) (Table 3).

Table 3. Appointment schedules at Nsiika HC-IV in Buhweju District, Uganda.

Variables	frequency (n)	Percentage (%)
Mode of scheduling appointment		
Phone call	30	22.22
Return date	105	77.78
Waiting time to speak to schedule staff (minutes)		
1-2	7	5.19
3-5	30	22.22
5-7	34	25.19
>7	61	45.19
Concern of schedule staff		
Strongly agree	36	26.67
Agree	37	27.41
Neutral	41	30.37
Disagree	14	10.37

Strongly disagree	4	2.96
Appointment date later than expected		
Yes	26	19.26
No	106	78.52
Waiting time at reception in minutes		
1-4	11	8.15
5-20	39	28.89
21-40	47	34.81
≥41	38	28.15
Time spent in exam room in minutes		
1-4	18	13.33
5-20	39	28.89
21-40	61	45.19
≥41	17	12.59

Most of the respondents (56.30%) would recommend the facility to their family and friends. They rated the competencies of healthcare workers who attend and help them at the ART clinic as very good ($n = 68; 50.37\%$) and good ($n = 50; 37.04\%$). The concerns that nurses showed to their problem was very good ($n = 64; 47.41\%$) and the response to their request is within reasonable time and rated as very good ($n = 65; 48.15\%$) and good ($n = 30; 22.22\%$). The nurse spent an average time with the patients and was rated as very good ($n = 50; 37.04\%$). The behavior of the health workers was rated as very good ($n = 60; 44.40\%$) and good ($n = 51; 37.80\%$).

Their skills were rated very good ($n = 59; 43.70\%$) and good ($n = 58; 42.96\%$). Respondents' questions answered to satisfaction was rated very good ($n = 64; 47.41\%$); clarity of explanation was rated very good ($n = 60; 44.44\%$) and patients' inclusion in healthcare decision ($n = 51; 37.78\%$) (Table 4).

Table 4. Behaviors of the health workers.

	Very Good	Good	Average	Fair	Poor
	n (%)	n (%)	n (%)	n (%)	n (%)
Nurse staff/counselor					
Competence of the nurse who helped you	68 (50.37)	50 (37.04)	15 (11.11)	1 (0.74)	1 (0.74)
Concern that the nurse showed to your problem	64 (47.41)	46 (34.07)	21 (15.56)	3 (2.22)	1 (0.74)
Response to your request within reasonable time	65 (48.15)	30 (22.22)	24 (17.78)	12 (8.89)	4 (2.96)
Seeing nurse/ counselors of your choice	45 (33.33)	19 (14.07)	30 (22.22)	28 (20.74)	12 (8.89)
Spending an average time with patient	50 (37.04)	25 (18.52)	38 (28.15)	12 (8.89)	8 (5.93)
Behavior of your health workers	60 (44.40)	51 (37.80)	17 (12.60)	6 (4.40)	0 (0)
Skills of the nurse/ counselors	59 (43.70)	58 (42.96)	11 (8.15)	2 (1.48)	2 (1.48)
Clarity of nurses'/counselors' explanation	60 (44.44)	54 (40.00)	14 (10.37)	4 (2.96)	1 (0.74)
Patients' inclusion in healthcare decision	51 (37.78)	54 (40.00)	21 (15.56)	2 (1.48)	1 (0.74)

Questions answered to satisfaction	64 (47.41)	26 (19.26)	29 (21.48)	12 (8.89)	4 (2.96)
Recommendation of a facility to a family/friend	76 (56.30)	26 (19.26)	24 (17.78)	8 (5.93)	1 (0.74)
Laboratory staff					
Rate professionalism/competence of the lab staff	46 (34.07)	35 (25.93)	17 (12.59)	5 (3.70)	1 (0.74)
Was the lab exam prompt, comfortable/courteous	45 (33.33)	30 (22.22)	19 (14.07)	3 (2.22)	3 (2.22)
<i>n</i> -frequency					
%percentage					

Qualitative results

Demographic characteristics: Five male and eight female participants were interviewed using a semi-structured interview guide, the participants' ages ranged from 18 to 50 years. They were mainly subsistence farmers and had no formal education. Four themes emerged as patients' perception receiving ART services at Nsiika HC-IV namely, positive attitudes of healthcare workers, quality services/skills, decision making, and dissatisfaction with the care.

Positive attitude of healthcare workers: The theme emerged from several subthemes emphasizing how nurses/counsellors interact with patients, and they love their services. They are compassionate about their health and give them medicine, as noted in their excerpts.

Services are not bad I love the services they talk to me well, we have good interaction (p1)

They behave well they give me medicine and their services are good...(p3,4)

Participants' perceptions indicated that the healthcare workers come to duty on time, welcome them, treat them well on first come, first serve basis with respect and listen to them as stated below.

Ever since I came here, they have always handled me well and the drugs I take have no bad effects on my health... (P2)

Get the services based on your arrival time.... (p1)

it depends on the time that you have arrived, when you arrive first you will be the first to go back home, the way you come is the same way you follow each other (p.6)

They nurses welcome people well.....when you enter ... you see someone welcoming you warmly. they listen well and pays attention to what you are telling him/her. they respond to you. (p; 3, 4)

Quality services/skills

Participants' perception of quality services/skills emanated from the subthemes of offering good service, teaching and stressing important point, giving advice and ensuring privacy as suggested below.

... ever since I came here for treatment, the health workers who are here are very good. when they need to take a blood sample from you, they send you down to the lab and take a blood sample from you, when you return, they give you your results. Now what else do you be wanting? In fact, questions come when they are teaching us! We have a counsellor who normally says, please ask me, so we ask her and she also asks us but for other health workers, in case any of them remembers something, they can contribute it... (p.3)

They teach you well how you will swallow drugs, Inquire why you have come late, what could be the reason... educate and emphasize what could be the effect if you miss the drugs (p4, 6).

Participants' perception on nurses' skills indicated that they have expertise and competencies that enable them to work faster and spend less time resulting in fewer no delays as exemplified by the participants statements.

The expertise of the health workers is good giving me the medicine well.... (p.4)

Health workers were trained well; the patient is handled well, comforts, Welcome you, show you where to sit work with smiles and you go home smiling....(p1).

They don't delay you, they search for your file and give it to you and they write for you the medicine.... (p3)

I have seen them working faster for me; they have given me drugs I am going home (P2)

Decision making

Participants were involved in decision-making regarding their care and treatment. This contributed to their satisfaction with ART services.

...he was responding well. Whatever he was asking me, I responded to him well... I got satisfied with the services (p.5)

Dissatisfaction

Few of the participants were dissatisfied with ART services due to late reporting on duty, longer waiting time, and long distances required to travel, as their comments describe:

pharmacy is where sometimes they delay giving out drugs (p9).

You are supposed to go in order a person calls him, talks for half an hour It makes you tired and you also complain (p9)

I reach here at 8 am and am treated at 12-1pm. I go back at 2pm while hungry, sometimes you have no money and you go with hunger because for us we go beyond this hill. I am disturbed nurse goes on phone and spends a half an hour, when does she get to work on the rest?you see a nurse telling you a lot of things, abuses you, lashing at you... if I take my drugs well why are they shouting at me? (p7)

Discussion

This study aimed to describe the perceived patient satisfaction and perceptions of ART services offered in rural southwestern Uganda. Overall, the majority of the study participants were satisfied with the ART services. Their perception about the services was good with the exception of a few who were dissatisfied with the ART services. Patient satisfaction is a crucial component of successful ART services [25]. The finding of patient satisfaction in our study is consistent with other studies [1,26-28] which reported that availability of medicines and knowledge on medication prescription contribute to satisfaction. Patient satisfaction entails the essential components of satisfaction highlighted by Thiedke [29]. The essential component of patient satisfaction included satisfactions around expectation, decision making, time spent, control, and dignity.

The satisfaction and perception in this paper is unique contrary to what is always perceived by the Ugandan population that most healthcare workers are rude and steal patients' drugs as reported in the study [30] thus affecting utilization of services. Could it be that the study was done at the clinic environment and may have influenced prejudices in the participant not to express dissatisfaction? Or could it be due to the culture where participant rarely talk of negativity of the services for the fear of losing it? Arguably the finding is authentic because the healthcare workers offering ART services undergo specific training in the treatment and the care of HIV/AIDS to equip them with the requisite skills to relate to and treat HIV/AIDS patients in a professional manner [21,31]. The finding of this study is consistent with the patient perception of the ART services and in agreement with previous studies on community- based ART programs that have achieved remarkable results in expanding access to ART in resource-poor settings; hence promoting retention [32].

Most participants in this study were within the reproductive age group of 18 to 35 years (39.26%) and adults 36 to 50 years (39.26%). This finding is in agreement with previous studies done in an African setting that the most PLWHA are within the reproductive age range [1]. Participants (81%) forms part of the active workforce and their economic contribution is crucial given that the main economy in the study area is agriculture. Increasing their household incomes could help mitigate the financial challenges encountered during the journey of

this chronic illness. Failure could contribute to poverty and retention challenges on ART consequently increasing their viral load that would contribute to more HIV transmission and earlier deaths. Satisfaction of services within this age group is an indication for continuity of care contributing to adherence and retention in ART services.

The finding of more females (51.90%) in this study concurs with previous studies [1] indicating more women than men seek care and receive ART. It may also add evidence that biologically, women are twice more likely to become infected with HIV through unprotected heterosexual intercourse than men and therefore, more women present at treatment centers [1,33]. In addition, that more women are diagnosed and treated during their reproductive ages because they have regular health services during pregnancy that may serve to diagnose a greater proportion of women as compared to men who are more likely to remain undiagnosed. Most of the participants had no formal education with the majority being subsistence farmers. Our study has demonstrated that health is an asset that irrespective of education level is protected by individual and participants were satisfied with the services received. The findings are in agreement with previous study [34] that found less educated gave a higher rating of their observation stay. Thus, correct information, support and accessibility of services provided by healthcare workers with positive attitudes empower the patient to take responsibility of their own health. Also, the location of the ART clinic within the community setting influence perceived satisfaction and perception.

General information while receiving art services

Most of the study participants indicated they would recommend the facility to family or friends demonstrating a high level of trust in the care and their satisfaction with the service. Nurses' expertise and competencies in offering services is linked to patients' satisfaction and essential in high quality care delivery. They rated their privacy at the ART clinic as good and very good indicating they are respected, and that confidentiality was maintained while receiving care. Respect is a key finding for building confidence of the patients to gain trust of the healthcare workers. Furthermore, it is an important moral aspect considered as one of the fundamental principles of bioethics that is central to clinical relationship [35,36]. Respecting patients allow them to be involved in making autonomous decisions about their care and experience improved clinical outcomes and greater satisfaction with their care [36]. Our finding was consistent with a patient satisfaction survey conducted in Singapore by Molina and colleagues [37] who reported that courtesy and respect displayed by doctors has a positive impact on patient satisfaction. Also, patients are more likely to miss appointments or to fail to follow medical advice when poor communication exists [37]. The finding of this study found the frequency of visits to the facility ranged between two and five visits and were primarily to the ART clinic. This reflected patient's stability on ART care. Lack of

stability could contribute to poor adherence and retention. These reports support Zakumumpa and colleagues [21] who advocate strategies adopted by front-line providers in Uganda to sustain ART delivery beyond the initial scale up phase between 2004 and 2009 emphasizing training workshops and spacing ART clinic appointments of stable patients to three to six visits per year.

Appointment schedules

The study participants were satisfied with their return appointment dates and the promptness of attention by the staff. The patients came to the clinic on the appointment date and this approach appears to be convenient for patients. Our finding adds evidence to prior studies that reported follow-up appointments are crucial for adherence to treatment [38,39] and supports studies about human resource utilization for distribution of patients through follow-up schedules to optimize the workload in the clinic [21]. The study participants demonstrated that healthcare workers were concerned with patients concerns and attended to them well. However, the waiting time at the reception ranging from 21 to 40 minutes contributed to some patient dissatisfaction as the participants attributed the waiting time to some healthcare workers reporting late to duty and other strange behaviors which included not greeting patients, abusing patients, and healthcare workers not paying attention to the patients but instead spend their time on phone. These negative attitudes could have detrimental implications to continuity of care. Such behavior should be corrected given that the lives of these patients and constraining more community spread of HIV are dependent on adherence and continuity of ART.

Behaviors of the health workers

No respondents answered the question about physicians' behaviors, indicating there were no physicians actively involved in ART services in the study site. The finding mimics Zakumumpa and colleagues [21] reports of non-physician-centered models among the staff involved in ART delivery in accredited health Centers by Ministry of health Uganda and the nurse-led ART service delivery model. Patients' satisfaction and perception with healthcare workers resulted from healthcare providers attitudes towards patient's care. This could have been genuine response because Patient satisfaction and perception indicated quality of services which corresponds with their adherence and retention in the ART program which might be due to good patient- healthcare relationships and attitude of caregivers. These positive responses indicate healthcare providers were trained and empowered to perform multiple tasks within the HIV care and treatment continuum beyond their traditional scope of practice [21]. The decentralization of ART services within patient environments facilitates easy accessibility and follow-up. This approach empowers patients to take responsibility and brings healthcare workers and patients closer together to achieve the common goal. This unique approach to care

could have been due to specific knowledge and skills HIV / AIDS care training of healthcare providers. Zakumumpa and colleagues in Uganda [21] found proper planning prior to scaling the ART services by adopting training workshops in ART management as a motivation strategy for health workers and adopting non-physician-centred staffing models as well as devising ART program leadership styles that enhanced health worker commitment. Similarly, Kamiru and colleagues [31] in Swaziland echoed the same arrangement which revealed that training increased the healthcare providers' self-efficacy to provide ART as well as attitudes towards PLWHA improved. The non-physician or nurse -led models in ART care have demonstrated effectiveness for delivery of quality care leading to patient satisfaction, ART adherence, and being retained in care. The ART model of care approach could inform practice in the care of other chronic conditions which are increasing. The current Uganda physician-to-person ratio is 1:25,725 and nurse to person ratio is 1:11,000 [40], while the WHO recommends one physician per 1: 1000 people; implementation of this non-physician model may alleviate some stress on the health delivery system for a wide range of chronic conditions in Uganda. Zakumumpa and colleagues [21] describe leveraging ART scale-up lessons in response to the NCD pandemic and advocate an increase the number of middle cadre healthcare workers which include nurses.

Our study participants were satisfied with the ART services due to perceived positive attitude of the healthcare workers who are welcoming, listen to patients, and are compassionate about their health. Participants reported healthcare workers have quality patient interactions and treat patients well including adherence to community accepted first-come, first-serve practices and demonstrating respect to patients. Listening and time are crucial elements in clinical practice that must be maintained by healthcare workers. The first rule of communication is listening [41]. Patient centered communication (PCC) that emphasizes listening positively influences patient satisfaction. Wanzer et al. [42] discovered that patients who received PCC were satisfied with their healthcare experiences.

Active listening in this study was valued by the patients and entailed active, total, and responsive actions that affected communication during ART services. When healthcare workers do not listen to views and concerns of patients, the patient get dissatisfied with the healthcare [43]. Research supports that physicians and nurses should undertake training in PCC to provide quality care to their patients according to Wanzer et al. [42]. The respondents indicated that healthcare workers offered satisfactory answers to the patients' questions, clarity of explanation, and included them in the decision making. Being involved in the decision making of their care is an indication of patient-centered care model that relies on core communication skills to respond to the unique needs, values, and preference of individual patients. Thus, patients' perceptions of the quality of the healthcare are dependent on the quality of their interactions with their healthcare clinician

and team [42]. Effective communication and health outcomes for patients and healthcare teams are interconnected and related. The connection that a patient feels with his or her clinician can ultimately improve their health mediated through participation in their care, adherence to treatment, and patient self-management [44]. The finding of being involved in decision making indicates a patient centered care based on personal preferences and involvement. The study participants were empowered and take on responsibilities in turn to collect medicine at the health centre as long as they have no current complaint in their health. These collective efforts are seen as having Ubuntu [45], being there for each other and going an extra mile. Ubuntu is an African philosophy which means being humane to one another. This collectiveness helps the community to save on high transports costs as one person volunteers each time to collect the drugs at the centre. This personalized care and support increases greater satisfaction, patients experience less regret, and make fewer complaints.

The study participants were satisfied because the services and skills nurses displayed in teaching and advising them about drugs and by working fast to help them spend less time at the clinic. More so, patients were satisfied because they receive free medication. This could have influenced their satisfaction as medicine for HIV/AIDS is free in government aided health facilities and is regarded as a lifeline in reducing the viral load. The advice given to patients especially stressing the points and ensuring that privacy is maintained throughout the interaction with patients showed optimal level of expertise and competencies of the healthcare workers. The availability of medication was reported in previous studies as an indication of patients' satisfaction [1].

Two participants were dissatisfied with some healthcare workers due to longer waiting time stemming from late reporting on duty, disruption while being examined by the healthcare worker, and not following arrival order. Other perceived strange behaviors of healthcare workers not greeting participants contributed to dissatisfactions. Although mentioned by very few participants such practices can hinder patients from seeking healthcare from the clinic. Any unacceptable disrespectful practices from healthcare workers should be investigated and if present, corrected. Previous studies found longer waiting hours are a source of patient dissatisfaction [28]. Long waiting time has been found not only to lead to dissatisfaction with services but also wage losses for patients [46] and can affect adherence and retention in the service and is a source of concern that requires appropriate attention and further exploration.

The study limitation

All studies have some limitations that affect interpretation of results. The data for study were conducted on patient exit from the clinic and in the same environment and this close timing and proximity could have biased participants'

responses. The participants' opinions in one health unit may not be generalizable across settings. COVID-19 presented some new challenges to patients who preferred to send their ART refill request through neighbors. Thus, fewer patients were present during the time of data collection; there may be some specific characteristics of the patients who were present that influenced their high satisfaction with the clinic care differently than the patients who refrained from attending during the pandemic. However, the perceptions of the patients who did attend the clinic were articulated in the questionnaires and interviews; the rigorous data analysis and interpretation likely render their responses valid.

Conclusion

PLWHAs at Nsiika HC were satisfied with ART services contributing to patient centred care that meets the patients' expectation of quality care with ART services. They had overall positive perceptions about the services, with very few who were dissatisfied with longer waiting times, lateness of some health workers, disruption while examining patients, and strange staff behavior.

The positive findings of this study could inform the practice of other chronic health problems such as NCDs by adapting on ART service delivery mechanism within the community to de-congest the overcrowded hospitals with limited resources. Though few, the negative behaviors reported could affect patient satisfaction and perception about the quality of healthcare and have negative implications for adherence, retention, and quality of lives given that the patients depend on ART for their survival. Although the ART clinics have non-physician or nurse-led model care practices, supervision should be emphasized frequently to ensure quality services and promote ART adherence and retention in the service. Integration of patient feedback such as that from this project into quality improvement plans in ART clinics and other services of chronic care services can be valuable to enhance the positive attributes of the care delivery model while attenuating any factors that promote negative perceptions.

Author Contributions

Conceived and participated in proposal development: RA EN JA EN AN OT MN GZR GN

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