

Factors Associated with Missed Appointment Date among HIV Positive adult Clients Attending Art Clinic at Masindi Port Health Center III

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ABSTRACT

Missed appointment is when a patient has missed the next follow up appointment immediately a day after an appointment date was scheduled but reported to the health facility before the three months elapse. To assess factors associated with missed appointment date among HIV positive clients attending ART clinic at Masindi Port HC III, Kiryandongo District. A cross-sectional study design employing quantitative method of data collection was done among 80 HIV positive adults attending ART clinic at Masindi Port Health Center III that were sampled using a simple random sampling method. Data were entered and analyzed using SPSS version 20.0 at a confident interval of 95% with a p-value of <0.05 for significance factors. The study findings showed that 17(65.4%) of the participants did miss their appointment date while 9(34.6%) were able to report back within three months post appointment date. The followings factors were significantly associated with missed appointment: Participant's age ($X^2=4.887$, p-value=0.027*), participant's average monthly income ($X^2=9.579$, p-value=0.002*), form of transport ($X^2=7.304$, p-value=0.026*), specific challenges faced by participants ($X^2=16.676$, p-value=0.001*) and religious status ($X^2=12.230$, p-value=0.002*). In conclusion, majority 17(65.4%) of the participants were able to missed their appointment date whereas 9(34.6%) were able to report back within three months post appointment date and it was found out to be significantly associated with both the client's related factors which includes; age of the participants, religious status, income level and the health facility related factors which includes; the form of transport used by the participants to access health care and the challenges the participants faced while accessing health care services.

Keywords: Factors, Missed Appointment Date, HIV Positive; Adult Clients

INTRODUCTION

Human immunodeficiency virus (HIV) is an infection that attacks the body's immune system, specifically the white blood cells called CD4 cells. HIV destroys the CD4 cells, weakening the persons immunity against opportunistic infections such as T.B, fungal infections, severe bacterial infections and some cancers [1-3].

Missed appointment is when a patient has missed the next follow up appointment immediately a day after an appointment date was scheduled but is reported to the health facility before the three months elapse [4]. However, strict appointment dates provide the best opportunity for clinical assessment for early detection of opportunistic infections and treat them, viral load estimation, to have HIV viral load suppressed to undetectable levels in blood, ART refill among others. [5]. High rates of missed appointments for routine HIV care are associated with unsuppressed viraemia, increasing morbidity and mortality due to opportunistic infections [6, 7]. Globally, there are 38 million people living with HIV [1, 8] and 65% of these people living with HIV are not able to keep their appointment dates strictly as given by the health workers. This has resulted into 690 deaths occurring annually due to unsuppressed viral load which increases susceptibility to opportunistic infection [9]. In Sub-Saharan Africa, about 26 million people are living with HIV/AIDS, with high death toll of about 55% due to opportunistic infections [10, 11]. With missed clinic appointments that currently stands at 62% a figure just slightly below the global value of missed appointment [12]. This high prevalent of missed appointment could be due to poverty, inadequate medical care, lack of prevention and education, and stigma [13].

In East Africa, about 50% of people are living with HIV and are already on ART. However, about 30% of these population had missed their ART appointment date [14] and this could be due to long waiting hours at the centers, poor doctor- patient relationship and fear of retribution for having missed previous scheduled visit, where some patients delayed going to the clinics [13]. Uganda has more than 1.2 million people living with HIV infection and more than 120,000 infected people die every year due to HIV related complications ([14]. Clinic appointment date attendance still remains low at 45% [15]. Non- attendance constitutes a challenge for

clinicians and clinical administrators in Uganda, failure to keep scheduled appointment has had a significant impact on the ability of hospitals to provide efficient and effective services to HIV positive clients and this has contributed to increased opportunistic infections and mal nutrition among HIV infected people [15]. Despite the fact that WHO, recommended that upon being diagnosed with HIV, a person should be linked to HIV care, start ART, adhere to the treatment regimen and be given review appointment dates during which health care providers would carry out clinical and laboratory assessment through viral load monitoring, screening for opportunistic infections such as TB, intensive ART adherence counselling, ART refill so as to have HIV viral load suppressed to undetectable levels in the blood[16]. However, no study has been so far conducted on the Factors associated with missed appointment date among adult HIV positive clients attending ART clinic with regard to Masindi Port HC III Kiryandongo District hence a need to carry out a study to assess the Factors associated with missed appointment date among adult HIV Positive clients attending ART clinic at Masindi Port HC III Kiryandongo District.

METHODOLOGY

Study design and rationale

A cross-sectional descriptive study design was used employing quantitative method of data collection. This design was used because the data was collected at one point in time.

Study Setting and rationale

The study was conducted at ART clinic of Masindi Port HC III, which is located in Masindi Port sub-county in Kiryandongo District, about 49 km from Kiryandongo main town, Kiryandongo District. The district is located in the western region of Uganda about 207km from Kampala and bordered by Nwoya District to the North, Apac District to the East, Oyam District to the North East, and Masindi District to the South and West. The major economic activities carried out in Masindi Port subcounty include farming, and livestock production. Activities carried out at Masindi Port HC III included HIV care services, treatment of medical conditions, children's conditions, maternal health, immunization, health education talk, growth monitoring and management of nutritional disorders among others. ART clinic is the area in the health facility where all HIV positive clients receive their care from. All families and households of Masindi Port subcounty seek medical services at Masindi Port HC III. And thus, is selected as the study area because it will be the catchment area of HIV positive clients hence a big population to be sampled for and easy accessibility by the researcher hence this will minimize the cost of transport during data collection. Approximately, about 50 clients is seen weekly hence 100 in two weeks.

Study population and rationale

The study included all HIV positive adult clients attending ART clinic at Masindi Port HC III during the time of data collection. This group was chosen due to high prevalence of HIV/AIDS among this group and their fear of revealing themselves therefore at increased rate of missing appointment date according to HMIS of Masindi Port HC III

Sample Size Determination

The sample size (n) was determined using Kish-Leslie formula for cross-sectional studies [17]

$$n = \frac{Z^2PQ}{(e)^2}$$

$$n = \frac{1.96^2 * 0.10 * 0.90}{0.05^2}$$

where; n is the desired sample size

where n=estimated sample of adult HIV clients missing appointment dates

z=z-score 95% confidence interval equal to 1.96, e=absolute error between the estimated and true population prevalence of HIV clients missing appointment dates 50.5%, p=assumed true population prevalence of adults missing appointment dates. Which is at 50.5%, 100-p is equal to the probability of the non-missing appointment dates, 100-50.5= 49.5%

$$n = \frac{1.96^2 * 0.505 * 0.495}{0.05^2}$$

384.123

To reduce on the sample, the finite formula is used

$$nf = \frac{n}{1 + \frac{n}{N}}$$

nf is desired sample sized when the population is less than 10000, n is calculated population size, N is the estimate of the population size=100 participants (HIV clients seen in two weeks at Masindi Port HC III)

$$nf = \frac{385}{1 + \frac{385}{100}} = 79.381$$

The researcher recruited only 80 participants due to limited time since data collection was given only two weeks and financial constraint.

Sampling procedure and rationale

The researcher used simple random sampling procedure. Here all participants had an equal chance of participating. The researcher prepared 160 small papers out of which 80 were marked with 1 while the rest were marked with 2. These papers were placed in a small box and on every field day, the researcher introduced himself to the target respondents daily and informed them of his aim and the aim of the study and therefore asked for their consent to participate in the study and whoever picked a paper with 1 was considered for the interviews and those who picked a paper labelled 2 were not be included in the study but were thanked and allowed to go home.

Inclusion criteria

The study included all adult clients attending ART clinic at Masindi Port HC III during the time of data collection and were able to make informed consent.

Exclusion criteria

Participants who declined to consent for the study for any other reasons, clients who were not feeling well during the time of data collection and were mentally incapacitated were not included for the study.

Independent variables

These were the factors associated with Missed Appointment Date among HIV Positive Clients and these included: Individual related factors and Health related factors.

Dependent variables

Missed Appointment Date among HIV positive.

Research Instruments

The researcher developed a semi-structured questionnaire. The questionnaire consisted of both closed-ended questions and open-ended questions. The questionnaire was written in English, and it was also translated to Runyoro, so as to enable those who were not able to read and interpret English to complete them in Runyoro. For those who were not completely able to read or write, the researcher read for them, and wrote their answers on to the questionnaire. The questionnaire consisted of sections A, B & C. Section A aimed at gaining demographic data such as age, level of education, occupation and marital status among others. Section B aimed at determining the client factors associated with Missed Appointment Date among HIV positive at MPHIC III. Section C aimed at determining the health facility related factors associated with Missed Appointment Date among HIV Positive at MPHIC III. Instruction guidelines was attached to the questionnaire, to guide the respondents as to whether they circled or ticked the chosen response.

Data collection procedure

Following approval of the research proposal, the researcher obtained an introductory letter from Kampala International University-School of Nursing Research Ethical Committee (KIUSONS REC). The letter was then presented to the health facility administrator for the permission to carry out the study, both verbal and written permission was obtained, the researcher presented himself to the person in charge of ART clinic who then introduced the researcher to the respondents. The researcher then informed the respondents of their rights to voluntarily consent or decline to participate, and to withdraw participation in the study at any time without penalty. Respondents were informed about the purpose of the study, the procedures that would be used to collect data, and were assured that there would be no potential risks or costs involved. After which then the questionnaire was issued out to the participants and read to them the instructions on how to answer the questions on the questionnaire. During data collection, the researcher avoided any form of dishonesty by recording truthfully the answers of the respondents who were not able to read or write. Data collection took two weeks.

Data Management

The questionnaires were collected, checked for completeness, consistency and accuracy after collecting them from the participants. They were further sorted, classified, put in the file and kept in a lockable cupboard.

Data Analysis

After the data collection, data were entered, organized and analyzed using a computer programme called Statistical Package for Social Sciences (SPSS) version 20.0 which helped to interpret and explain the meaning of the findings. This data was analyzed by using descriptive statistics, where frequency tables, pie-charts, and charts was used and data entered as frequency and percentage. The independent variables included factors associated with Missed Appointment Date among HIV Positive Clients and these included: Individual related factors and Health related factors. For dependent factors, the participants were asked whether they went for their HIV care services regularly as per their appointment date.

Ethical Considerations

Informed consent: Consent from the respondents were sought. Individual respondents were made to understand that no monetary benefits would be paid for taking part in the study, and they were free to withdraw from the study at will without any penalty.

Confidentially: No names or form of identification was required on the research instruments. This helped to ensure that respondents were free while delivering information.

RESULTS

Individual related characteristics of the participants

Table 1: Showing Individual related characteristics of the participants (N=80)

Character	Variable	Frequency (N)	Percentage (%)
Age group in years	<20 years	1	1.3
	20-34	41	51.2
	≥35	38	47.5
Marital status	Single	29	36.2
	Married	31	38.8
	Divorced/Separated	16	20.0
	Widow/Widower	4	5.0
Education level	Non-formal	26	32.5
	Primary	29	36.3
	Secondary	22	27.4
	Tertiary	3	3.8
Religious status	Catholic	37	46.3
	Anglican	23	28.7
	Moslem	14	17.5
	Born again	6	7.5
Occupation	Peasant	44	55.0
	Civil servant	11	13.8
	Housewife	8	10.0
	Business	7	8.7
	Student	10	12.5
Income level	<50,000=	25	31.2
	≥50,000=	55	68.8

According to the study findings (Table 1) above, the mean age of the participants was 35.53 where it was found out that majority 41(51.2%) of the participants were within the age bracket of 20-34 years as compare to only 1(1.3%) who was below 20 years. About 31(38.8%) of the participants were married whereas only 4(5.0%) of the participants reported that they were widowed/widowered. Most 29(36.3%) of the participants had reached primary level of education whereas only 3(3.8%) had reached tertiary level of education. Nearly a half 37(46.3%) of the participants were catholic as compare to only 6(7.5 %) who were born-again. This imply that majority 44(55.0%) of the participants were peasant farmers however more than a half 55(68.8%) of the participants earned an average monthly income of 50,000= and above as compare to only 7(8.7%) of the participants who were carrying out some business and of which only 25(31.2%) earned less than 50,000= on a monthly basis.

Prevalence of participants who missed their appointment date

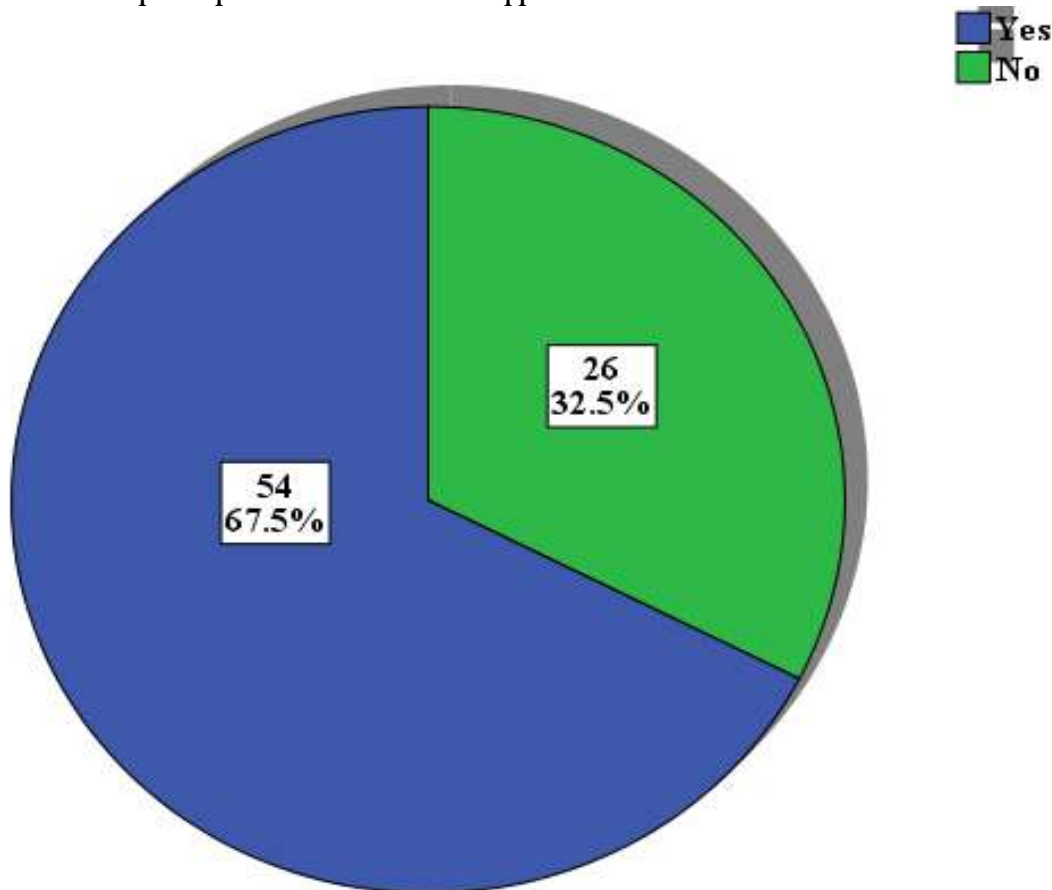
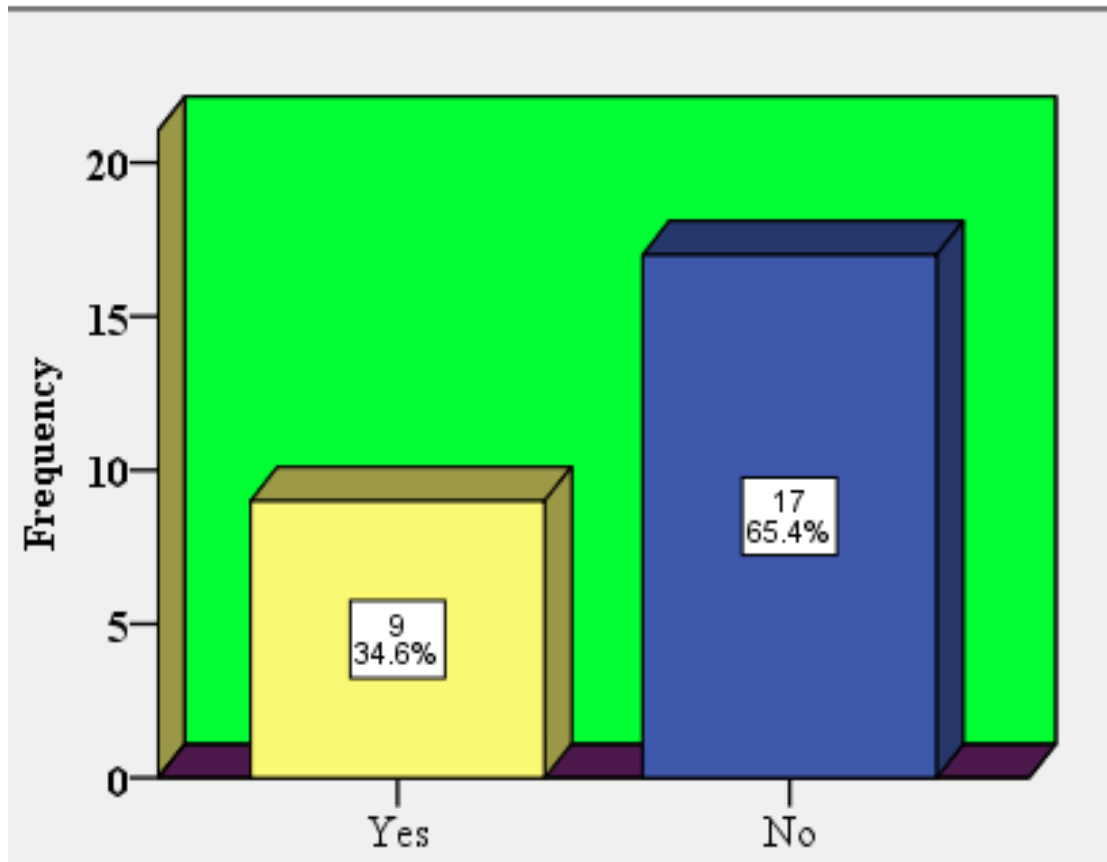


Figure 1: Showing prevalence of participants who missed their appointment date

From figure I above, it showed that majority 54(67.5%) reported to always attend their ART appointment date meanwhile 26(32.5%) of the participants reported to ever missed their appointment date whenever scheduled.

Prevalence of participants who missed their appointment date and their reporting status to the health facility before the three months elapse



***Only asked those who missed their appointment date from figure 1**

Figure 2: Prevalence of participants who missed their appointment date and their reporting status to the health facility before the three months elapse

From figure above, the results finding showed that, more than a half 17(65.4%) of the participants didn't go back to the health facility within three months post appointment date as compare to only 7(34.6%) who reported that they always do go back to the health facility within three months post appointment date.

Table 2: Health facility related factors

Character	Variable	Frequency (N)	Percentage (%)
Distance from health facility	<5 km	41	51.2
	≥5 km	39	48.8
Form of transport	Walking	43	53.8
	Bicycle	27	33.7
	Taxi	10	12.5
Long waiting for health care services	Yes	56	70.0
	No	24	30.0
Duration taken before receiving health care services	<2 hours	23	28.7
	≥2 hours	33	41.3
	Missing variables	24	30.0
Faced challenges when getting health care services	Yes	59	73.8
	No	21	26.2
Specific challenges faced	Late coming of health workers	14	17.5
	Language barriers	11	13.7
	Walking long distance	13	16.3
	Harsh health workers	21	26.3
	Missing variables	21	26.2

From the table 2 above, majority 41(51.2%) of the participants reported to have been within 5 kilometers from the health center whereas 39 (48.8%) reported to have come from a distance of 5 kilometers and above from the health facility, out of those more than a half 43(53.8%) of the participants said they do always walk to the health center as compare to only 10(12.5%) who do use a taxi in order to access health center. Nearly three-quarter 56(70.0%) of the participants said they always take long to access health care services as compare to only 24(30.0%) who said they always receive their health care services on time. Out of those who said yes, 33(41.3%) reported to have taken 2 hours and above waiting while only 23 (28.7%) said they do wait for not more than 2 hours whenever they are accessing health care services. Nearly three-quarter 59(73.8%) of the participants said they do faced challenges when accessing the services from the health center while only 21(26.2%) didn't mention any challenges faced when getting health care services and majority 21(26.3%) reported harshness of the health workers while minority 11(13.7%) only reported language barriers as their major challenges whenever accessing health care services.

Table 3: Association between the client's related factors, health facility related factors and the missed appointment date of the participants (Those who didn't report back to the health facility within three months)

Characteristics	Variables	Missed appointment date		df	X ² (p-value)
		Yes N(%)	No N(%)		
Age group in years	<20 years	0(0.0)	0(0.0)	1	4.887(0.027*)
	20-34	7(53.8)	6(46.2)		
	≥35	12(92.3)	1(7.7)		
Marital status	Single	9(60.0)	6(40.0)	2	3.636(0.162)
	Married	6(100.0)	0(0.0)		
	Divorced/Separate	4(80.0)	1(20.0)		
	Widow/Widower	0(0.0)	0(0.0)		
Education level	Non-formal	4(57.1)	3(42.9)	3	4.707(0.195)
	Primary	8(80.0)	2(20.0)		
	Secondary	7(87.5)	1(12.5)		
	Tertiary	0(0.0)	1(100.0)		
Religious status	Catholic	6(100.0)	0(0.0)	3	12.230(0.007*)
	Anglican	10(90.9)	1(9.1)		
	Moslem	1(20.0)	4(80.0)		
	Born again	2(50.0)	2(50.0)		
Occupation	Peasant	8(61.5)	5(38.5)	3	6.004(0.111)
	Civil servant	6(85.7)	1(14.3)		
	Housewife	0(0.0)	1(100.0)		
	Business	0(0.0)	0(0.0)		
	Student	5(100.0)	0(0.0)		
Income level	<50,000=	13(100.0)	0(0.0)	3	9.579(0.002*)
	≥50,000=	6(46.2)	7(53.8)		
Distance from health facility	<5 km	7(77.8)	2(22.2)	1	0.155(0.694)
	≥5 km	12(70.6)	5(29.4)		
Form of transport	Walking	9(69.2)	4(30.8)	2	7.304(0.026*)
	Bicycle	10(90.9)	1(9.1)		
	Taxi	0(0.0)	2(100.0)		
Long waiting for health care services	Yes	15(83.3)	3(16.7)	1	3.128(0.077)
	No	4(50.0)	4(50.0)		
Duration taken before receiving health care services	<2 hours	6(85.7)	1(14.3)	1	0.047(0.829)
	≥2 hours	9(81.8)	2(18.2)		
Faced challenges when getting health care services	Yes	17(81.0)	4(19.0)	1	3.442(0.064)
	No	2(40.0)	3(60.0)		
Specific challenges faced	Late coming of health workers	2(66.7)	1(33.3)	3	16.676(0.001*)
	Language barriers	4(100.0)	0(0.0)		
	Walking long distance	0(0.0)	3(100.0)		
	Harsh health workers	11(100.0)	0(0.0)		

*Significant variable, X²= Chi square value, p-value

Bivariate analysis was performed to generate Chi square. The confidence interval was set at 95% and a P-value of <0.05 were considered to be statistically significant as shown in Table 2 above. A number of factors were found to be significantly associated with the missed appointment date: Participant's age (X²=4.887, p-value=**0.027***), participant's average monthly income (X²=9.579, p-value=**0.002***), form of transport (X²=7.304, p-value=**0.026***), specific challenges faced by participants (X²=16.676, p-value=**0.001***) and religious status (X²=12.230, p-value=**0.002***). Other variables were not statistically significantly associated with missed appointment date however were influential factors associated with missed appointment date and

these includes: majority 12(92.3%) of the participants who were 35 years and above missed their appointment date, missing the appointment date was high 6(40.0%) among participants who were single, 8(80.0%) of the participants who attained primary level of education were able to miss their appointment date, most 10(90.9%) of the participants who missed their appointment date were Anglican, out of which 8(61.5%) who missed their appointment date were peasant farmers, however, majority 13(100.0%) of the participants who missed their appointment date reported an average monthly income of less than 50,000=, missing appointment date was also high among participants who travelled over 5 kilometers distance to the health center at 12(70.6%) out of which 10(90.9%) reported that they do ride the bicycle to the health facility, about 9(81.8%) of the participants who reported to have a long waiting of more than 2 hours were able to miss their subsequent appointment date, 17(81.0%) of the participants who reported to have always faced the challenges during health care seeking and walking long distance were reported by many 11(100.0%) participants to be their main reasons for missing the appointment date.

DISCUSSION

The findings revealed that majority 12(92.3%) of the participants were above 35 years of age between were able to miss their appointment date. This could be due to stigma from their age mates as they fear disclosing their status and other related challenges. This study finding opposed the findings from a community-based cross-sectional study that was conducted to assess the factors associated with missed appointment date among HIV positive clients in Ethiopia which revealed that 15.2% of the clients below age of 20 years had only attended one clinic date appointment and clients of 20-30 years or more were 3.79 times more likely to fully attend their clinic appointment dates [18, 19]. According to this study findings, it was showed that 8(80.0%) of the participants who had attained primary level of education were more likely to miss their scheduled appointment date than their counterpart. This could be due to lack of proper communication by the health workers towards these participants as they are not able to read and understand very effective. This study finding is in line with a cross-sectional study done among 1,927 HIV positive clients to assess the factors associated with Missed Appointment Date Among HIV Positive Clients in Ethiopia where it was indicated that clients whose educational level was higher than secondary had full clinic appointment date attendance 57.7 % and 57 %, respectively than those with low education levels at 14% attendance [20]. In this study finding, it indicated that majority 8(61.5%) of the participants who missed their appointment date were peasant farmers. This could be attributed to busy schedule in their farm work and inadequate knowledge regarding treatment regimen hence they need to be reminded frequently. This study is in agreement with a community-based cross-sectional study conducted to assess the factors associated with Missed Appointment Date Among HIV Positive Clients in Jigjiga District, Ethiopia, showed 56.1% of the clients who had a job/employment had full clinic appointment date attendance as compare to 29.4% of the clients who were peasants [21, 22]. According to this study finding, it revealed that 13(100.0%) participants who earned an average monthly income of 50,000= and above were more likely to miss their appointment date than their counterpart. This could be due to the nature of work they do which could make them busy and fear of being revealed to their friends. This study finding is in line with the finding from a cross-sectional study that was done to assess the factors associated with Missed Appointment Date Among HIV Positive Clients in Nigeria which revealed that clients who had two or more sources of income, showed a strong association with clinic appointment date attendance as opposed to those clients who had no source of income [23, 24]. This study findings revealed that 12(70.6%) of the participants who come from a distance of more than 5 kilometers from the health facility were more likely to missed their appointment date out which 10(90.9%) do walk on foot to the health facility. This could be associated with bad weather especially rain and too much sunshine, income shortage for transport which entirely make them fail to access the health facility. This study is in line with a community based cross-sectional study that was done to assess the factors associated with Missed Appointment Date Among HIV Positive Clients among 120 clients in Athens, Greece which revealed that, long distance health facilities was a major factor affecting appointment date attendance of (76%), and that majority of clients (86%) reported that walking long distance to reach the facility greatly affected the appointment attendance [18]. This study also showed that majority 9(81.8%) of the participants reported long waiting hours to a major factor contributing to their reasons of missing the appointment date. This could be due too much workload by the health worker due to their shortage hence many patients and few health workers. This study is in line with a s correctional study done among 120 clients in Kaduna state of Nigeria to assess the factors associated with Missed Appointment Date Among HIV Positive Clients, were the findings of the study revealed that, long waiting time at the health facility (17.5%), was a major determinant for the missed appointment dates of (72%) in the area, and that majority of the clients (84%) reported long waiting hours at the facility as the major factor hindering appointment date attendance [25].

CONCLUSION

In conclusion, majority 17(65.4%) of the participants were able to missed their appointment date whereas 9(34.6%) were able to report back within three months post appointment date and it was found out to be significantly associated with both the client's related factors which includes; age of the participants, religious status, income level and the health facility related factors which includes; the form of transport used by the

participants to access health care and the challenges the participants do faced while accessing health care services.

RECOMMENDATIONS

The recommendation is for Masindi Port Health Center to utilize social village health teams or client representatives to ensure drug delivery and avoid transport issues. The center's management should provide necessary resources for health workers to improve service delivery. The Ugandan government should allocate funds to support village health teams and expand health centers to all parishes, addressing issues with missing appointment dates. This will help resolve transportation challenges and improve healthcare delivery.

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