

The Impact of Covid-19 Pandemic and Gender-Based Violence on Uptake of HIV Services in Touboro District Hospital, Cameroon

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Abstract

As we move towards HIV epidemic control in Cameroon, we strive to limit the number of new infections by maintaining on-treatment PWHIV. The emergence of the Covid-19 pandemic may cause interruptions in HIV treatment and slow progression. COVID-19 control measures have caused; the lockdown of businesses, some health services, and imposed work from home, with intimate partners and more people spending longer hours together at home. As a consequence, there is an increased risk of gender-based violence (GBV). GBV can affect adherence to treatment in PWHIV and prevent them from accessing health services. The main objective of the study was to determine the effect of Covid-19 and GBV on the uptake of HIV services by assessing interruptions in treatment. Using a structured questionnaire, demographic data, Information on COVID-19 and intimate partner violence were obtained from 339 participants between 15 and 60 years old, taking HIV treatment at the Touboro district hospital. We used the Antiretroviral treatment register of the health facility to extract data on the frequency and duration of interruption in treatment. The Prevalence of intimate partner violence was high in our study participants, although interruption in treatment was only significant in respondents who reported verbal abuse. A strong association was observed between Covid 19 and interruption in treatment. There was equally an association between Covid-19 and an increase in intimate IPV. Other Socio-demographic variables found to affect interruption in treatment were level of Education of the partner, Age difference with intimate partner greater than 10years, and early years on antiretroviral therapy. According to the study, Both Gender-based violence (IPV) and Covid-19 affect interruption in antiretroviral treatment.

Keywords: GBV, Interruption in treatment, IPV, PWHIV Covid-19.

Introduction

Although over the decades, there has been a decrease in the incidence of new HIV infections and an increase in life expectancy for those infected due to available life-saving antiretroviral therapy (ART), HIV remains a significant public health challenge [1]. In 2019, about a 38million people globally were living with HIV. An estimated 68% of adults and 53% of children living with HIV globally were on (ART) [2]. Women and girls are more exposed to acquiring new infections compared to men in

sub-Saharan Africa. 59% of all new HIV infections in 2019 were women and girls [3]. The trends in a decrease in the number of deaths and new HIV cases have fallen because of gaps in HIV patient care, including interruptions in HIV treatments. GBV has been identified as a factor that prevents women from accessing HIV services, exposing them to a greater risk of HIV or of developing HIV-related complications. GBV may be one of the reasons why so far, controlling the epidemic in women and girls is more challenging [4, 5].

GBV is an umbrella term for any harmful threats or actions directed at an individual or group based on their actual or perceived biological sex, gender identity, expression, or sexual orientation [6]. Threats could be sexual, physical, mental, or economic harm brought to a person in public or in private and can take different forms. Some forms of violence include intimate partner violence, sexual violence, child marriage, female genital mutilation, or 'honor crimes' [7]. An increase in GBV has been observed with the onset of Covid-19 like with other types of emergencies due to lockdown, increasing the time spent together at home by the survivors and their abusers, but also due to reduced access to support services [8].

With the progress achieved so far towards HIV control, there is a need to ensure uninterrupted HIV service delivery in safe environments in the context of Covid-19 [9]. The delivery of HIV services and other public health interventions will have to be evaluated and upgraded to take into account new constraints. Covid-19 is affecting communities by increasing morbidity and mortality t also imposing changes in lifestyles with social distancing [10]. About 5,7 million new cases of Covid-19 and over 87,000 deaths were reported globally in April 2021 [11]. In Cameroon, 74,733 confirmed cases and 1,144 deaths were documented between January 2020 and May 2021 [12]. With Covid-19 infecting health care workers and patients, some essential services are interrupted due to temporal closure of different health units, Caregivers, and patients' absence [12]. Fear of Covid-19 may prevent PWHIV from reporting for ARV pick. Concerning healthcare access, us the g vulnerability index, there is lower access to healthcare in the North, compared to the remaining 09 regions of Cameroon [13].

Focus on Covid-19 control has affected the supply chain network for HIV commodities which could cause an interruption in antiretroviral treatment [10]. Data collection and analysis across different population groups

on Covid-19 infection is encouraged to see how the disease affects people and to take inclusive measures to control it [8]. In Cameroon, like other countries, gender inequalities continue to shape how individuals respond to health care services, such as uptake of HIV services [4]. Women and adolescents are most vulnerable to gender-based violence, usually due to their inability to negotiate safe sex for social and cultural reasons. Women are sometimes forced to find a means to sustain other family members. These may expose them more to Covid-19. According to different studies, Females are 2.4 times more likely to suffer from Covid-19 peritraumatic distress compared to males [14].

Although there is no difference in risk of acquiring Covid-19 in PWHIV and the general population [15], this may not be the same with advanced HIV infection. Moderate levels of anxiety, depression, and low coping strategies were found in health care workers working in the context of Covid-19 [16, 17]. These can affect the quality of psychosocial services offered to HIV patients in care. It is important to improve mental health and wellbeing, as well as promote behaviour change in distressed persons [17]. Family support, positive thinking, and religion are some coping strategies that helped healthcare workers. Hospitals need to identify creative ways to help staff and clients manage psychosocial and mental challenges [18].

The fear of Covid-19 infection induces mental stress and stigma similar to HIV-related stigma. Focus on Covid-19 control could cause interruptions in the supply chain mechanism for essential HIV antiretroviral treatment and other commodities, thereby causing interruptions in treatment [10, 19]. Interruptions in treatment due to GBV or Covid or both may affect the quality of HIV patient care and, as a result, affect results achieved so far in reaching HIV epidemic control. Harmful gender norms affect health-seeking behaviors. Violence has been associated with reduced linkage to HIV care

and treatment and reduced ART adherence, especially in women [6]. In a cross-sectional study by Evolcam with 19 health centers in Cameroon, Intimate partner violence amongst women with HIV was found to be about 29% and a significant barrier to continuity in HIV treatment [18]. Different studies have been carried out on the impact of gender-based violence on HIV services. However, very few have been carried out in Cameroon and even fewer that take into consideration the combined impact of Covid-19 and GBV. Here we seek to assess the Prevalence of Gender-based violence in our study population determine and compare interruption in antiretroviral treatment in clients who reported at least one form of GBV and those that did not. To determine the association between Covid 19 and GBV on interruption of antiretroviral treatment and assess other risk factors associated with interruptions in HIV treatment in the context of the Covid-19 pandemic.

Materials and Methods

The study was a cross-sectional questionnaire-based survey in clients receiving HIV antiretroviral treatment at the Touboro District Hospital HIV care and treatment unit in the North Region of Cameroon. The study participants were both male and female aged between 15 to 60 years and taking treatment at the Touboro district hospital HIV care and treatment unit for at least 6 months. A total of 339 participants were recruited into the study through consecutive sampling. Only those that gave their consent were included in the study to avoid coercion. Proposal to take part in the study took place only after clients had received their routine follow-up visit package. For those who accepted to participate, a questionnaire was administered by trained health care providers to avoid bias due to the participants not understanding the questions if read by themselves. The questionnaire was well-structured with a section on Intimate partner violence, Covid-19 risk perception, and other

factors likely to cause interruption of antiretroviral treatment. A pilot test of the questionnaire was done with Health care workers and PWHIV to improve the validity and reliability of the questionnaire.

The outcome indicator was an interruption in ART(IIT). We considered an interruption in treatment as restarting treatment after being off treatment for more than 28 days. To verify association, we categorized interruptions as less than 28 days, greater than 28 days, and none (No interruption in treatment. Univariate logistics was used to evaluate the relationship between intimate partner violence and interruption in treatment and the relationship between Covid-19 and interruption in treatment. Logistics regression was also used to determine the relationship with the different types of intimate partner violence. Associations were established between the identified risk factors and interruption in treatment. P-Values of 0.05 and less will be considered significant for this study. Before the study, the Questionnaire and data extraction tool was pre-tested to ensure all questions could be responded to and that they were easy to understand by our study participants. Measures were taken for confidentiality and respect of participants' privacy during the study. Ethical clearance sought and obtained from the University of Douala Ethical review committee.

Results

Socio-Demographic of the Study Population

A total of 339 HIV-positive clients with a mean (SD) age of 37.4 (3.5) years attending the Touboro District Hospital for antiretroviral treatment and routine follow-up participated in the study. Females made up for 59.9% (203) and males 40.1% (136). The predominant age group was 17 - 25 years (27.4%). Most participants were married (92.3%) and had no formal level of education (51.9%). 95% lived with their partners. 51.9% of sexual partners had an informal education. 71.4% of participants

had age differences with intimate partners less than 5 years. 86.2% of all participants had not

disclosed their HIV status to their partners (Table 1).

Table 1. Baseline Characteristics of Study Participants

Variable	Category	% (n/N)
Sex	Male	40.1 (136/339)
	Female	59.9 (203/339)
Age group (Years)	17 – 25	27.4(93/339)
	26 – 34	26.0 (88/339)
	35 – 42	20.1 (68/339)
	Greater than 42	26.5 (90/339)
Mean age (Standard deviation)	37.4 (11.2)	
Marital status	Single	5.6 (19/339)
	Married	92.3 (313/339)
	Divorced	2.1 (7/339)
Level of Education	Informal	51.9 (176/339)
	Primary	35.7 (121/339)
	Secondary	12.4 (42/339)
Employment status	Unemployed	92.6 (314/339)
	Employed	7.4 (25//339)
Type of union	Monogamy	43.1 (146/339)
	Polygamy	49.6 (168/339)
	none	7.4 (25/339)
Living with an intimate partner	Yes	95.0 (322/339)
	No	5.0 (17/339)
Partner’s educational level	Informal	51.0 (173/339)
	Primary	19.2 (65/339)
	Secondary	29.8 (101/339)
Age difference with sexual partner (in years)	Does not apply	6.5 (22/339)
	Less than 5	71.4 (242/339)
	5 to 10	3.5 (12/339)
	Above 10	18.6 (63/339)
Decision about health	Participant	85.5 (277/339)
	Partner	13.9 (47/339)
Disclosed HIV status to a partner	Yes	17.4 (59/339)
	No	82.6(280/339)

The Prevalence of Gender-based Violence in our Study Population

90.6% (307/339) of the participants experienced physical violence in the past 12 months. Predominantly females (84.7%) compared to males (0.7%), and the difference was significant at $P < 0.001$. Table 2 shows the

Proportion of participants physically hurt concerning sex and age.

61.7% (209/339) of the participants reported emotional violence; receiving insults or humiliation by their intimate partners. More females compared to males reported emotional violence (64.0%) and (58.1%) respectively, with females in the 35 – 42-years age group

most affected (67.6%) although this difference was not significant. Only 1% of participants all-female reported psychosocial violence feeling threatened by their intimate partner. Verbal abuse was reported by 60.5% of participants. there was a significant difference in verbal abuse between women and men, $P < 0.001$. More women (28.1%) compared to males (14.0%) were yelled at or cursed. The age

group 17 – 25 (40.9%) were the most vulnerable ($P = 0.006$). See Table 3.

GBV and Interruption in Antiretroviral Treatment

There was a significant difference in an interruption in treatment, participants who reported verbal abuse in Table 4 ($\chi^2 = 5.381$, $P = 0.048$).

Table 2. Prevalence of Physical Violence by sex and by Age

Variable	Category	Number examined	Physically hurt % (n)		Level of significance
			Yes	No	
Sex	Male	136	0.7 (1)	99.3 (135)	$\chi^2 = 20.129$ *** $P < 0.001$
	Female	203	84.7 (172)	15.3 (31)	
Age group (Years)	17 - 25	93	87.1 (81)	12.9 (12)	$\chi^2 = 6.968$ $P = 0.073$
	26 - 34	88	93.2 (82)	6.8 (6)	
	35 - 42	68	97.1 (66)	2.9 (2)	
	Greater than 42	90	86.7 (78)	13.3 (12)	

***statistically significant at $P < 0.001$, a statistic computed using Fishers Test

Table 3. Prevalence of Verbal Abuse by an Intimate Partner in our Study Population

	Category	Number examined	Yell or Curse			Level of significance
			Never	Rarely	Most times	
Sex	Male	136	57.4 (78)	28.7 (39)	14.0 (19)	$\chi^2 = 30.733$ $P < 0.001$
	Female	203	27.6 (56)	44.3 (90)	28.1 (57)	
Age group (Years)	17 - 25	93	40.9 (38)	32.3 (30)	26.9 (25)	$\chi^2 = 18.153$ $P = 0.006$
	26 - 34	88	43.2 (38)	29.5 (26)	27.3 (24)	
	35 - 42	68	35.6 (32)	54.4 (49)	10.0 (9)	
	Greater than 42	90	35.6 (35)	54.4 (49)	10.0 (9)	

^astatistic computed using Fishers Test

Table 4. Relationship between forms GBV and Interruption in Treatment in our Study Population

Variable	Category	Number examined	Interrupt ARV treatment		Level of significance
			Yes	No	
Physically violence	Yes	307	74.6 (229)	25.4 (78)	a $P = 0.130$
	No	32	87.5 (28)	12.5 (4)	
Emotional Violence	Never	130	73.1 (95)	26.9 (35)	$\chi^2 = 0.860$ $P = 0.354$
	Sometimes	209	77.5 (162)	22.5 (47)	
psychological violence	Never	336	75.6 (254)	24.4 (82)	a $P = 1.000$
	Sometimes	3	100.0 (3)	0.0 (0)	
Verbal Abuse	Never	134	73.9 (99)	26.1(35)	$\chi^2 = 5.381$ $P = 0.048^*$
	Rarely	129	82.2 (106)	17.8 (23)	
	Most times	76	68.4 (52)	31.6 (24)	

^aStatistic Computed using Fishers Test

Covid-19 and Interruption in Antiretroviral Treatment

More participants that did not know Covid-19 interrupted ARV treatment (89.7%) when compared to those who did (74.5 %). There was

a significant difference between participants who thought that Covid-19 makes HIV worst and interrupted antiretroviral treatment and those that thought otherwise ($\chi^2 = 5.257$ P = 0.042*, CI= 95%) as shown in Table 5.

Table 5. Covid-19 and Interruption in Treatment

Variable	Category	Number examined	Interrupt treatment		Level of significance
			Yes	No	
Knowledge of Covid	Yes	310	74.5 (231)	25.5 (79)	$\chi^2 = 3.314$
	No	29	89.7 (26)	10.3 (3)	P = 0.069
Do you think Covid makes HIV worse?	Yes	100	81.0 (81)	19.0 (19)	$\chi^2 = 5.257$
	No	209	71.8 (150)	28.2 (59)	P = 0.042*
	I don't know	30	86.7 (26)	13.3 (4)	
Interrupted treatment because of Covid	Never	127	35.4 (45)	64.6 (82)	$\chi^2 = 180.556$
	Less than 28 days	175	100.0 (175)	0.0 (0)	P < 0.001***
	Above 28 days	37	100.0 (37)	0.0 (0)	
Has Covid affected your relationship with your partner	More violence	44	95.5 (42)	4.5 (2)	$\chi^2 = 10.639$
	No effect	295	72.9 (215)	27.1 (80)	P < 0.001***
Has Covid affected you?	Affected	309	74.4 (230)	25.6 (79)	P = 0.072
	No effect	30	90.0 (27)	10.0 (3)	
How did Covid affect you	No effect	30	90.0 (27)	10.0 (3)	$\chi^2 = 8.840$
	Family	14	100.0 (14)	0.0 (0)	P = 0.012**
	Acquaintance	295	73.2 (216)	26.8 (79)	
Has Covid affected your income?	No	30	90.0 (27)	10.0 (3)	P = 0.042*
	Yes	309	74.4 (230)	25.6 (79)	

Statistically significant at P < 0.05, **Statistically significant at P < 0.01, *** statistically significant at P < 0.001

There was a significant difference in the number of participants who interrupted treatment for less or more than 28 days due to Covid 19 and those who never interrupted treatment with ($\chi^2 = 180.556$, P < 0.001***). Participants who reported Covid-19 affected their relationship with their intimate partner ($\chi^2 = 10.639$, P < 0.001*** CI=95%). Also, participants whose family member was affected by Covid-19 significantly interrupted treatment (100%) compared to other groups ($\chi^2 = 8.840$, P = 0.012** CI =95%). There was equally a significant difference in participants who reported interrupting treatment for less or more than 28 days due to Covid 19 and those who never interrupted treatment with ($\chi^2 = 180.556$, P < 0.001***).

Predictors of Risk Factors associated with Interruptions in HIV Treatment

Multivariate analysis demonstrated that participants whose partner's educational level were informal (P = 0.041), primary (P < 0.001), with age difference with a sexual partner above 10 years (P < 0.001), and whose duration of ARV treatment between 1 – 3 years (P = 0.003) were more likely to interrupt their ARV treatment. Participants who had a primary and an informal level of education were 8.1 and 1.6 times more likely to interrupt ARV treatment when compared to those with a secondary level of education.

Table 6. Logistics Regression Model on other Factors Associated with Risk of HIV Treatment Interruptions

Variables	Bivariate logistic regression		Multivariate logistic regression	
	COR (95% CI)	P-value	AOR	P-Value
Age group (Years)				
>42	Reference	-	Reference	-
35 - 42	1.5 (0.7 – 3.1)	0.3009	1.6 (0.7 – 3.8)	0.292
26 - 34	1.0 (0.5 – 2.0)	0.9399	1.3 (0.6 – 2.9)	0.452
17 - 25	1.5 (0.8 – 3.0)	0.2464	1.1 (0.5 – 2.5)	0.886
Sex				
Female	Reference	-	Reference	-
Male	1.3 (0.8 – 2.2)	0.314	1.8 (0.9 – 3.4)	0.078
Level of education				
Secondary	Reference	-	-	-
Primary	0.7 (0.3 – 1.6)	0.4650	0.8 (0.4 – 1.2)	0.623
Illiterate	1.6 (0.7 -3.5)	0.2444	1.6 (0.6 – 4.2)	0.318
Type of Union				
Monogamy	Reference	-	Reference	-
Polygamy	1.2 (0.7 – 2.1)	0.3946	0.7 (0.4 – 1.4)	0.311
None	2.8 (0.8 – 9.8)	0.1133	0.7 (0.1 – 10.5)	0.775
Partner's educational level				
Secondary	Reference	-	-	-
Primary	8.5 (3.2 – 23.1)	<0.001	8.1 (2.7 - 24.1)	<0.001***
Informal	2.8 (1.6 – 4.8)	<0.001	1.9 (1.0 – 3.6)	0.041*
Age difference with a sexual partner				
5 to 10	Reference	-	Reference	-
Above 10	10.5 (2.3 – 48.7)	0.0026	20.4 (3.5 – 116.9)	<0.001***
Less than 5	1.7 (0.5 – 5.6)	0.3677	1.5 (0.4 – 5.8)	0.532
Does not apply	7.1 (1.1 – 45.5)	0.0375	5.6 (0.2 – 174.8)	0.323
Who makes decision				
You	Reference	-	Reference	-
Partner	1.4 (0.65 – 3.0)	0.3866	1.1 (0.4 – 3.1)	0.868
Duration on ARV				
>3 years	Reference	-	Reference	-
1 – 3 years	3.1 (1.5 – 6.1)	0.002	3.8 (1.6 – 9.1)	0.003**
< 1 year	2.6 (0.9 – 7.8)	0.089	2.8 (0.8 – 10.4)	0.112

Discussion

In this study, of the 339 respondents, 90.6% reported physical violence. Most of the participants who reported physical violence were females (84.7%) compared to males (0.7%), and the difference was significant at $P < 0.001$. This finding was similar to that in

another study in Mwanza, Tanzania where 63.8% of women living with HIV self-reported physical violence [20]. Women are more at risk of physical violence compared to men, and this leaves them at risk of not being able to access health services as desired. One study has indicated that IPV may be more common in relationships where the age difference between

partners is greater than 10 years [21]. 61.7% of respondents in our study also reported emotional violence. Participants reported that they faced insults or were belittled by their intimate partners. More women reported emotional violence 64.0 % compared to men 58.1 %, although the difference is not significant. This proportion is higher than that reported in a previous study in Cameroon by EVOLCam, where emotional violence was 22% in women living with HIV [22]. This difference could be due to the differences in the socio-cultural environments of the two studies. However, in both studies, women remain vulnerable to emotional violence. We did not find psychological violence to be a significant form of violence in our study population, and this finding is contrary to findings from another study in the southwest region of Cameroon, where over 50% of respondents report psychological violence [23]. This difference may be due to the presence of a security crisis in the southwest region of Cameroon. Verbal Abuse was the most prevalent form of intimate partner violence in our study population, with more female respondents' victims compared to men. Studies show that people living with HIV face an increased risk of verbal abuse, especially when their status is disclosed, and are advised by health providers to disclose status wisely [24]. In a study that involved 5 countries, reports showed high rates of verbal abuse and negation, which negatively affect access to health services by people living with HIV and this has a negative consequence in interruptions in treatment [25].

Concerning whether participants thought Covid 19 could worsen HIV outcomes, we had a significant difference in an interruption in treatment with respondents who did not know, being the greater proportion of clients interrupting treatment. This indicates that other factors than Covid 19 influenced interruption in treatment for this group of persons, such as low literacy level fear of stigma, which has been implicated in reasons for non-adherence to

treatment in people living with HIV [26]. The study showed that a good number of respondents had interrupted treatment due to Covid-19 for less or more than 28 days. This ties down with concerns that Covid -19 could negatively impact progress that has been achieved so far in HIV patient care [10]. Participants who had a family member infected by Covid 19 were very likely to interrupt treatment. In this study. Studies have shown that the risk of developing severe Covid symptoms was 30% in HIV-infected persons compared to the general population. This stresses the fact that HIV-positive persons need to stay on antiretroviral treatment to stay healthy and also get vaccinated against Covid -19 [27].

We identified other significant factors that affect interruption in treatment from respondents in our study, such as the literacy level of the intimate partner; Interruptions in treatment were common in respondents whose partner had only an informal ($P = 0.041$), or primary education ($P < 0.001$), also in respondents who an age difference of above 10 years ($P < 0.001$) with intimate partner and who were in their early years of antiretroviral treatment; between 1 – 3 years ($P = 0.003$) [28].

The study also showed a strong relationship between Covid 19 and increased partner violence, with a higher proportion of respondents 95.5%, who interrupted treatment reporting increased partner violence compared to 72.9% of respondents who said Covid 19 had no effect on partner violence and interrupted treatment. This finding ties down with the observation that gender-based violence, especially for women and girls has increased globally since the start of the Covid -19 Epidemic [29].

Conclusion

This work sook to show the impact of gender-based violence on Uptake of HIV services, using Intimate partner violence as a form of gender-based violence and interruption

in antiretroviral therapy as a function of uptake of HIV services. We observed that the Prevalence of intimate partner violence was high in our study participants however, interruption in treatment was only significant for those respondents who reported verbal abuse. Also, we sought to show the effect of Covid 19 on treatment interruption. We observed that there was a strong association between Covid 19 and interruption in treatment as well as an increase in intimate partner violence. Other Socio-demographic variables like literacy, the Age difference between intimate partners over 10years, and early years on antiretroviral therapy, were associated with the risk of interruption in antiretroviral treatment. Although the study shows an association between Covid 19, Intimate partner violence, and interruption in treatment, there is a limitation in generalizing findings as the study took place only in one health facility. We recommend future studies consider a multicentre approach. We do hope this work contributes to information on Covid -19, HIV, and Gender-based violence triple pandemic management efforts.

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Recommendations

To reduce the impact of Covid-19 and GBV on uptake of HIV services as with other health issues, we recommend interprofessional education with multidisciplinary teams to create a learning forum for health workers to cooperate, learn new skills, and find new ways of delivering patient-centered care [30].

To create a curriculum that is adapted for health care workers with different levels of education and understanding to use in sensitization of on Uptake of HIV services during COVID19 pandemic [31].

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Conflict of Interest

The authors declare that there is no conflict of interest.

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