

## Assessment of Problems & Challenges faced by Anti-retroviral Therapy Seekers at an ART Centre of tertiary care hospital during the COVID-19 -pandemic

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### ARTICLE CYCLE

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### ABSTRACT

**Background:** The prodigious COVID-19 pandemic has gravely impacted people with pre-existing health issues and has also had a negative impact how these health issues were managed. COVID -19 pandemic has a significant impact on patient receiving treatment in tertiary care hospitals. HIV care cascade disruption linked to the COVID-19 Pandemic. COVID-19 pandemic-associated disruptions in the HIV care cascade. Even temporary disruptions in ART services can cause long-term increases in HIV-associated morbidity and mortality. So, this study was worked out to evaluate problems faced by the beneficiaries due to the COVID-19 pandemic in seeking services at ART centers **Aim & Objective:** Aim was to assess the various problems encountered by ART seekers during the COVID-19 pandemic. The primary objective was **to identify the key challenges** faced by ART seekers in accessing treatment and follow-up services during the COVID-19 pandemic. **Settings and Design:** A teaching hospital's ART centre served as the study's location. The study's cross-sectional design was intended to accomplish the objectives. **Methods and Material:** A cross-sectional study was planned to inquire about the challenges faced by HIV patients in availing of ART services during the spread COVID-19 across the world. Antiretroviral therapy seekers getting treatment from a selected ART center were included in the study. Problems faced by participants during the pandemic in availing of ART services were recorded with the help of semi-structured proforma. **Statistical analysis used:** Statistical data analysis was carried out with the assistance of SPSS -24. Chi-square test was applied for find out the association. **Results:** Almost 35% of participants could not turn up on time for follow-up as scheduled, and 24% reported deterioration due to difficult access to ART services during the universal spread of COVID-19 . A statistically significant relationship was found between the status of follow-up with sex and occupation **Conclusions:** The present study concluded that the COVID-19 pandemic significantly affected ART seeker's accessibility to health care. Movement restriction was the main problem & missed follow-up was the most common challenge faced by ART seekers during the COVID-19 pandemic.

### KEYWORDS

Problem; Challenge; COVID-19 Pandemic; ART Seekers; ART Center

### INTRODUCTION

In 2019, the estimated number of persons living with HIV (PLHIV) nationwide was 23.49 lakh (17.98 lakh-30.98 lakh), with a 0.22% (0.17-0.29%) HIV

prevalence among adults aged 15-49. In 2019, there were 58.96 thousand (33.61 to 102.16) AIDS-related deaths nationwide(1). In order to achieve the "End of AIDS" by 2030, NACP has set the goal of

reaching 90-90-90 by 2020 (2). Three decades later, the national response has produced noteworthy results, including a 54% decrease in AIDS-related fatalities since 2007 and a 66% decrease in new infections since 2000. Having achieved the Millennium Development Goals (MDGs) targets by 2015 (a reduction of more than 50% in the number of new HIV infections and AIDS-related deaths per year)(3). Therefore, the next seven years were crucial, and investments made during this time will yield significant progress towards the "Ending of AIDS." The goal of achieving universal coverage of HIV prevention, treatment, and care continuum services that are efficient, inclusive, egalitarian, and tailored to requirements has been jeopardised by the COVID-19 pandemic. Service interruptions brought on the COVID-19 may result in hundreds of thousands of HIV deaths(2). The poll comes after a modelling exercise organised by UNAIDS and WHO in May that predicted that AIDS-related fatalities in sub-Saharan Africa might double in 2020 alone if access to ARTs is disrupted for six months(4). According to another study (5 )a notable decline in the 90-90-90 goals in 2020 as compared to 2017–2019 could be caused by COVID-19 crisis. It was anticipated that as the epidemic lasted longer, the number of HIV-related deaths and new HIV infections would rise (6,7) COVID-19 as a result of stopping antiretroviral treatment (ART) therapy failure, opportunistic infections, virologic resistance, HIV transmission from mothers to children, mortality, and HIV transmission in the community are all increased when therapy is interrupted (8).

**Aim & Objective(s)** to enquire about the hurdles faced by ART seekers in availing services at an ART center during the COVID-19 pandemic

**Objectives-**

1. Problems faced by Anti-retroviral Therapy Seekers at an ART Centre of a tertiary care hospital during the COVID-19 -pandemic
2. Challenges faced by Anti-retroviral Therapy Seekers at an ART Centre of a tertiary care hospital in the duration of COVID-19 spread.

**MATERIAL & METHODS**

Patients getting treatment for HIV from Anti-retroviral Treatment (ART) centers were included in the survey. Anti-retroviral drugs are provided at ART centers. **Ethical Approval and Informed Consent:** The institutional ethical committee of

selected government teaching hospitals has reviewed and approved the study. The participants were briefed referring to the intent and course of action of the study then written informed consent was obtained from all the participants of the study. They were insured about the confidentiality of the information provided. Pre-tested semi-structured proforma for collection of data was administered which included oral questionnaires to assess the problems faced by HIV patients in availing services in ART centers during the COVID-19 pandemic along with epidemiological information of participants collected like age and occupation. This proforma was filled by trained interneers posted in the Community Medicine department with the help of direct face-to-face interviews. **Study setting -The** study was accomplished in the ART center, affiliated with Agra's Government tertiary care hospital. **Study design –** A Descriptive cross-sectional study design was found most suitable and feasible to fulfill the study's objectives. **Inclusion & Exclusion Criteria** All the ART seekers visiting on the days of the survey and who had given written informed consent for participation in the study were included in the study while ART seekers who came for the first time and Participants having Incomplete proforma were not allowed in the study.

**The sample size & study duration –** The study was time-bound so the data was collected for a duration of 6 months (July 2022 to January 2023). All the participants came in above mention duration and fulfilling the inclusion & exclusion criteria were recruited. Finally, a total of 296 participants were included in the final analysis. Data was collected with the help of semi-structured proforma. Socio-demographic profiles along with the problems & challenges faced by the participants were enquired. The situations participants faced were considered as problems and the responses because of these situations were considered as challenges. Data analysis was performed with the help of the software SPSS (Statistical Package for Social Sciences) version 25.

**RESULTS**

Table 1 shows Maximum of 93% of participants were adults, more participants 63% were males, and 48% were from the general category. A maximum was a Middle school pass, 64% among them were working and 88% were Hindu.

**Table 1 Socio-demographic profile of study participants**

Variables	Frequency	Percentage
Age group	Child	5
	Adolescence	6

<b>Sex</b>	Adult	274	92.6
	Old	11	3.7
	Male	188	63.5
<b>Category</b>	Female	108	36.5
	General	142	48
	OBC	113	38.2
<b>Education</b>	SC	37	12.5
	ST	4	1.4
	Illiterate	33	11.1
	Primary School	46	15.5
	Middle School	68	23
	High School	63	21.3
	Intermediate /diploma	57	19.3
<b>Occupational status</b>	Graduate	23	7.8
	Post Graduate	6	2
	Working	190	64.2
<b>Religion</b>	Not working	106	35.8
	Hindu	262	88.5
	Muslim	32	10.8
	Cristen	2	0.7

Figure 1 shows fear of contracting COVID-19 (in 57% of participants) & movement restriction (in 25% of participants) due to the lockdown were the main

problems that prevented the participants from availing of services at the ART center during the COVID-19 pandemic.

**Figure 1 Problems Faced by participants in availing services at ART center during the Covid-19 pandemic**

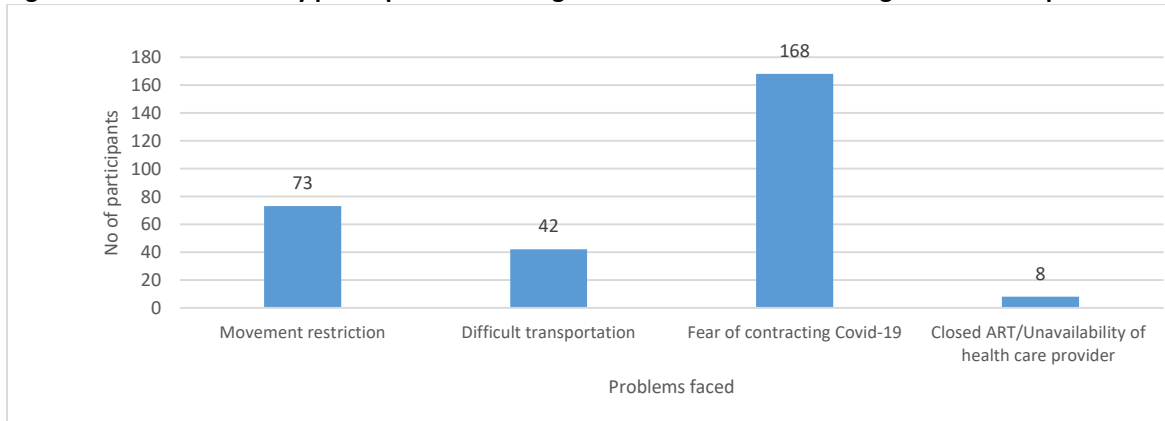
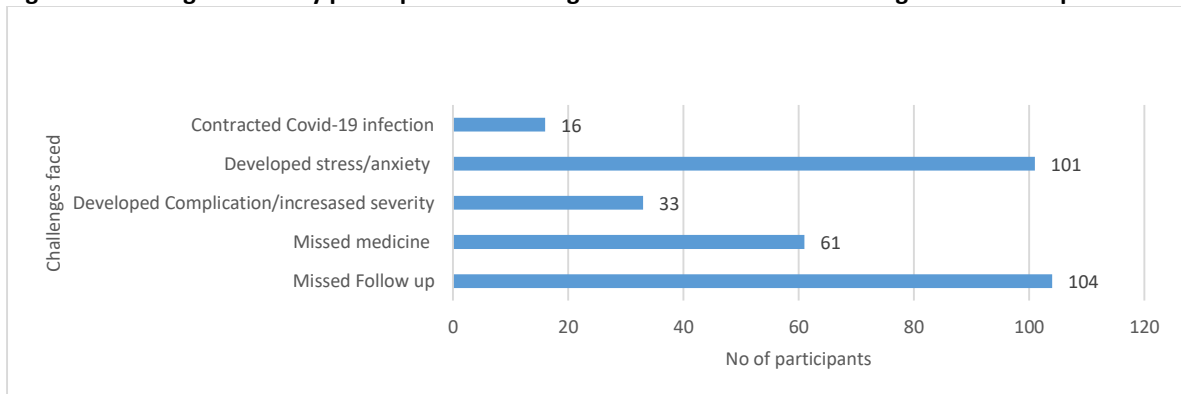


Figure 2 shows that missed follow-up & development of stress/anxiety were the main

challenges faced by study participants during the worldwide spread of COVID-19.

**Figure 2 Challenges Faced by participants in availing services at ART center during the Covid-19 pandemic**



**Table 2** Chi-square test was applied to demonstrate the association between socio-demographic profile & problems & challenges faced by study participants in availing services provided at ART centers during the COVID-19 pandemic, statistically

significant association was established between the status of follow-up with sex and occupation. Female and non-working group tends to have more loss to follow up as compared to male and working respectively

**Table 2 Relationship of follow-up Status with Sex and occupation**

		Came for follow/up		Total	df	Chi-square	P value
<b>Sex</b>	Male	131	57	188	1	5.24	0.02
	Female	61	47	108			
<b>Occupation</b>	working	134	56	190	1	7.40	0.006
	Non-working	58	48	106			
<b>Total</b>		192	104	296			

**DISCUSSION**

The COVID-19 pandemic significantly disrupted healthcare services globally, posing severe challenges for individuals on long-term regular medications such as Anti-Retroviral Therapy (ART). The current study aimed to assess the problems and challenges faced by ART seekers at an ART center during the pandemic. The findings of the current study highlighted various problems encountered by patients, including missed follow and, psychological distress. A statistically significant association was found between sex, employment status, and missed follow up of the study participant.

Ahmed A (9)et al conducted interviews with 25 PLWH who participated in semi-structured interviews in the local language, Urdu, at the ART Centre of the Pakistan Institute of Medical Sciences in Islamabad between December 2020 and April 2021. Although the objective was similar to the present study's, it was a qualitative study unlike ours. Parikh N et (10) PLHIV and HIV care providers (HCPs) from five Indian states (Karnataka, Tamil Nadu, Maharashtra, Andhra Pradesh, and Telangana) participated in 150 telephonic in-depth interviews. Recordings, transcriptions, codes, and interpretative phenomenological analyses were used to examine the interviews. They revealed how existing inequities in HIV treatment and care are exacerbated by the COVID-19 pandemic. lack of transportation, financial issues in navigating transport, and police clearance were identified as challenges in accessing care at the time of the pandemic, almost similar to challenges faced by participants of the current study. Pollard R et al (11) conducted a focus group discussion on twenty-four participants. They concluded that COVID-19 restrictions had a greater impact on access to HIV antibody, CD4, and RNA testing services. Although

in the current study specific service statuses were not inquired

Linnemayr, S et(12) al conducted a study in which One hundred (n = 100) Ugandan adults on ART, from an existing study were randomly selected and enrolled. Rapid content analysis and descriptive statistics were used in the recording, transcription, and analysis of the interviews. 76% of clients reported that COVID-19 harmed their ability to travel to HIV clinics, 54% thought that visiting the clinic increased their risk of contracting COVID-19, and 14% said that COVID-19 hurt their adherence to antiretroviral therapy. Most of the problems identified in the above study were the same as the current study.

Salako AO et al (13) conducted a cross-sectional study with PLWH who were 18 years of age or older and who came in for care. Information on demographics, knowledge of COVID-19, and difficulties in getting care during the COVID-19-induced lockdown was gathered by an interviewer-administered questionnaire. SPSS version 23.0 was used to analyse the survey data after it was converted to Excel. The most frequent difficulties encountered were dietary (40.7%), money (68%), and psychological (78.5%). Significant correlations were found between lack of income (OR: 1.7, CI1-3, p=0.048), lack of food (OR:2.5, CI1.4-4.5, p=0.002) and psychological challenges (OR:1.8, CI 1-3.5, P=0.05).In the above study, lack of food was found to be one of the significant problems identified unlike the current study.

Chilot, Dagmawi et al (14) conducted a study on 212 patients with HIV. A total of 58 (27.4%) Participants missed visits for refills. Age ≥ 55 [AOR = 6.73, 95% CI (1.495–30.310)], fear of COVID-19 [AOR = 24.93, 95% CI (2.798-222.279)], transport disruption [AOR = 4.90, 95% CI (1.031–23.174)], reduced income for traveling to health facility [AOR = 5.64, 95% CI

(1.234–25.812)], and limited access to mask [AOR = 7.67, 95% CI (1.303–45.174)], sanitizer [AOR = 0.07, 95% CI (0.007–0.729)] and non-medical support [AOR = 2.32, 95% CI (1.547–12.596)] were the factors found to be associated with missed follow-ups.

Although they were aware of the COVID-19 preventive measures. The costliest COVID-19 preventive measures that caused a financial burden to the patients were the costs of buying facemasks (63.7%), disinfectants (55.2), and sops for handwashing (22.2). Participants who missed follow-up diagnostic tests were 56 (26.4%). Variables that were found to be statistically significant include the following: age  $\geq$  55 [AOR = 0.22, 95% CI (0.076–0.621)], partial lockdown [AOR = 0.10, 95% CI (0.011–0.833)], difficult access to health services [AOR = 0.15, 95% CI (0.045–0.475)], financial constrain for traveling to a health facility [AOR = 0.18, 95% CI (0.039–0.784)], and unavailability of mask [AOR = 0.12, 95% CI (0.026–0.543)]. Around 30% (55) of Participants missed counseling. Age  $\geq$  55 [AOR = 0.21, 95% CI (0.078–0.570)], fear of COVID-19 [AOR = 0.11, 95% CI (0.013–0.912)], reduced income [AOR = 0.17, 95% CI (0.041–0.699)], unable to get face mask [AOR = 0.19, 95%CI (0.039–0.959)], and partial lockdown [AOR = 0.08, 95% CI (0.008–0.790)] were found to be statistically significant in multivariate logistic regression. In addition to the current study above study found a new challenge in treatment compliance during the COVID-19 pandemic like the unavailability of masks.

Samudyatha UC (15) *et al* by their study concluded that ART services to PLHIV continued satisfactorily during the COVID-19 lockdown, although not without challenges, such as disruption in laboratory services. In the current study effect on specific ART services were not inquired. Like the current study, Sharma S *et al* (16) also found out of 357 patients, 56 had missed treatment and 10 were LFU. The main reasons for the missing were running out of pills, being busy with other things, and being away from home. The number of episodes of missed and LFU increased during the pandemic. The main problems faced were lack of transport (24), fear of catching the disease (7), and no money to hire a vehicle (5).

## CONCLUSION

The present study concluded that the COVID-19 pandemic exceptionally crashed the accessibility of ART services. The main challenge was the implementation of lockdown, significantly hindering patients' ability to reach ART centers for treatment and scheduled follow-up. These restrictions had inadvertently disrupted routine

healthcare services, including ART delivery. The main victims were females & nonworking ART seekers. Missed follow-up was identified as the most common challenge among ART seekers during the global COVID-19 spread. Missed follow-up care gives rise to a grave threat to the patient's health, due to interrupted treatment, poor treatment adherence, and increased chances of disease complication and progression or drug resistance. Ultimately it leads to poor overall health The study highlights the need for robust healthcare policies and strategies to warrant uninterrupted care for ART patients during health catastrophes. Solutions such as telemedicine consultations, community-based medication delivery systems, and flexible scheduling could play a vital role in mitigating the impact of such disruptions in the future. Surely this will have an enduring bang on our health-related sustainable developmental goals. This fallback is going to be crucial.

## RECOMMENDATION

there should be an emergency preparedness or emergency plan, and we should have an alternative community-based drug delivery system combined with teleconsultation. We may have mass dispensing of drugs for emergencies and the role of strong technology support for continuity of care

## LIMITATION OF THE STUDY

The current study includes only an ART center, the inclusion of more ART centers would have given a broad picture of problems & challenges faced by ART seekers. This study can only highlight the effect on morbidity that too at a very small level but the Real estimation of impact on morbidity & mortality is the need of the hour.

## RELEVANCE OF THE STUDY

Study Provides insights into how an unforeseen emergency can strain established healthcare infrastructure. The result of the study Reinforces the need for inclusive healthcare planning to protect morbid patients in cases of emergency. This study Recommends measures that can be adopted by Health systems to minimize the impact of future public health crises

## AUTHORS CONTRIBUTION

All authors have contributed equally.

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Nil

## CONFLICT OF INTEREST

There are no conflicts of interest.

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## DECLARATION OF GENERATIVE AI AND AI ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

The authors haven't used any generative AI/ AI assisted technologies in the writing process.

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