



Completion of Primary Package Sessions by Adolescent Girls and Young Women Before and During COVID-19 Period: Case of DREAMS Program in Zimbabwe

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Abstract: Rapid increase in Coronavirus disease 2019 (COVID-19) cases in Zimbabwe resulted in lockdown measures to curb further transmission. Participation of Adolescent Girls and Young Women (AGYW) in HIV prevention programs was erratic during lockdown periods due to movement restrictions. We assessed completion of primary package sessions among AGYW aged 10-24 years enrolled in the Determined, Resilient, Empowered, AIDS-free, Mentored and Safe (DREAMS) program before and during COVID-19 periods, in Bulawayo, Gweru and Mazowe districts. Secondary analysis of routine program data for AGYW aged 10-24 years enrolled in the DREAMS program in Bulawayo, Gweru, and Mazowe districts was conducted. Data for the period 1 April 2019 to the 31 March 2020 (period before COVID-19) and 1 April 2020 to the 31 March 2021 (COVID-19 period) were extracted from the DREAMS District Health Information Systems (DHIS 2) database and analysed using SPSS generating descriptive statistics. Completion was defined as AGYW who went through and finished the HIV prevention, gender norms and financial literacy sessions after enrolment in DREAMS. Chi-square test was used to assess differences in completion rates between different categories of AGYW. Data for 52,300 AGYW enrolled in the DREAMS program were analysed and the median age was 15 years (IR, 7). Overall completion rate of primary package sessions in DREAMS program was 96.0% (50,184/52,300), with the completion rate before COVID-19 period being 96.8% (25,460/26,299) and 95.1% (24,724/26,001) during the COVID-19 period. Session completion before COVID-19 period was high among those in-school, out of school, age groups 15-19, 20-24, among young mothers, as well as Bulawayo and Gweru districts ($p < 0.001$). Also, the 10-14 years old, people Living with HIV (PLHIV), and young women selling sex (YWSS) showed higher completion of primary package sessions before than during COVID-19 period. However, session completion for young mothers dropped from 97.5% before COVID-19 to 86.1% during COVID-19 period. Completion of DREAMS primary package sessions remained high during the COVID-19 period although it dropped by 1.7%. Despite travel and meeting restrictions during the COVID-19 period, session completion remained high, and this can be attributed to the use of virtual platforms and effective community follow-up mechanisms for AGYW invested by the DREAMS program. We recommend scaling up the DREAMS HIV prevention primary package sessions delivery models employed during COVID-19 period and improve session delivery strategies for young mothers to match the other categories of AGYW.

Keywords: Completion, DREAMS, Sessions, Primary Package, COVID-19

1. Introduction

1.1. Background

High incidence of Human Immunodeficiency Virus (HIV) among Adolescent Girls and Young Women (AGYW) resulted in implementation of mitigation measures in sub-Saharan Africa to curb the devastating impact of the pandemic. The Determined, Resilient, Empowered, AIDS-free, Mentored and Safe (DREAMS) intervention was designed to reduce the risk of acquiring HIV among AGYW. Through the DREAMS program, there is layering of services which include health, education, psychosocial, economic, and community interventions [1]. Research has shown that the multifaceted approach of offering the package of services help to empower AGYW in low resource settings [2, 3]. Starting 2019, the global community was hit by another public health threat, that is Coronavirus disease 2019 (COVID-19). COVID-19 was declared a global public health emergency, with low resource countries being affected given their fragile health delivery systems. COVID-19 pandemic affected provision of and access to healthcare services including Tuberculosis (TB), HIV, and malaria [4]. HIV related deaths during the COVID-19 period were estimated to have increased by 10% in low and middle-income countries (LMIC) in comparison to the periods without the COVID-19 pandemic [5]. Moreover, there were high projected rates of child and maternal deaths during the same period due to the COVID-19 imposed lockdowns which limited people's access to healthcare services [6]. Simultaneously, cases of gender-based violence (GBV) which largely affects women and children increased during the COVID-19 period; this increased risk of AGYW contracting HIV given the hardships faced in accessing response mechanism and health services [7]. Prior to the COVID-19 period, literature had shown that AGYW face a disproportionately high risk of contracting HIV with sub-Saharan Africa worst affected [8]. Moreover, women and girls who experience GBV have a higher risk of contracting sexually transmitted infections (STIs), including HIV [9]. Implementation of DREAMS program activities which are meant to reduce new HIV infections among AGYW, was affected during the COVID-19 period.

The first case of COVID-19 was recorded in Zimbabwe in March 2020, and the country experienced 4 waves of the pandemic between April 2020 and December 2021. As of September 30, 2021, Zimbabwe had recorded 130,820 confirmed COVID-19 cases, including 123,016 recoveries and 4,623 deaths. The government of Zimbabwe (GoZ) imposed COVID-19 lockdown measures to curb rapid transmission of the virus following the World Health Organisation (WHO) guidelines; this resulted in movement restrictions and most program activities were negatively affected [10]. Thus, the DREAMS intervention was deeply affected by the COVID-19 pandemic as most interventions are group-based and implementation happens within communities' engagement, often requiring meetings and traveling which were banned during the period. To the best of our knowledge, completion of primary package sessions by AGYW in

DREAMS before and during the COVID-19 period in Zimbabwe has not been extensively explored. We conducted an assessment to determine completion rates of primary package sessions by AGYW before and during COVID-19 period. The assessment objectives included to determine completion of DREAMS primary package sessions by AGYW before and during the COVID-19 period, and to assess factors associated with completion of primary package sessions before and during the COVID-19 periods among AGYW aged 10 to 24 years enrolled in the DREAMS program from the 1st of April 2019 to 31st of March 2020 for the period (before COVID-19) and 1st of April 2020 to the 31st of March 2021 for the period (during COVID-19) period.

1.2. Enrolment of AGYW in the DREAMS Program

The 10-24 years old AGYW at risk of contracting HIV were reached through mobilisation by the Out of School Club Facilitators (OOSCF) in communities and teachers in schools. Screening for DREAMS eligibility was conducted using the standard program screening tool (Form 1) which captures demographic details, orphanhood status, indulgence in sex, experience of any gender-based violence, alcohol misuse and if the AGYW had experienced any of this, they would be eligible for enrolment into the program and referred for services per their specific vulnerabilities. A DREAMS program enrolment tool was administered which captured the demographic and social details, exposure to sexual gender-based violence and HIV risk assessment. AGYW enrolled in the DREAMS program attend the HIV prevention, gender norms and financial literacy sessions which empower them with skills to reduce their risk of acquiring HIV. Attendance registers were used to track attendance and retention into these DREAMS sessions. At a minimum, and to complete the DREAMS minimum package, AGYW are expected to remain in the program for at least six months. Data on attendance and retention in the HIV prevention, gender norms and financial literacy sessions were captured in the program DHIS2 database.

1.3. DREAMS Primary Package

AGYW who are eligible for enrolment in the DREAMS program are registered for primary package which is the HIV prevention, gender norms and financial literacy sessions which are delivered by trained Out of School Club facilitators (OOSCFs). The HIV prevention sessions cover sexual education to empower AGYW to avoid risky sexual behaviours which increase chances of contracting HIV. The sessions detail HIV transmission pathways and ways to reduce the risk for acquiring HIV by AGYW. There are eight HIV prevention chapters with each chapter being covered in a one-hour session. AGYW at risk of acquiring HIV build strong social networks during the sessions through interaction and sharing ideas with others. The sessions connect the adolescent girls and young women with peers and adults who can offer emotional support as well as information and material which reduce their risk of acquiring HIV. It is also

through the HIV prevention sessions that AGYW build social skills that may improve girls' abilities to protect themselves by reducing their social isolation and providing them with social safety nets through mentors, peer groups, civic engagement, and access to health information and services. There are nine gender norms sessions which sensitize AGYW on harmful practices which increase the risk of AGYW contracting HIV. Negative gender norms have a bearing on the health of girls and women. In addition, gender norms sessions empower AGYW to fight harmful cultural practices, religious beliefs, and unhealthy relationships which often put girls and young women at risk of contracting HIV. Thus, the HIV prevention and gender norms sessions complement each other for comprehensive HIV prevention awareness. During these sessions, some AGYW may open-up on cases where they were involved in HIV risk behaviors and hence, they will be offered counselling, and or referred for appropriate services. Financial literacy which is an entry point for supporting vulnerable girls and young women to pursue micro-enterprise pathways are offered concurrently with the HIV prevention and gender norms sessions. There are eleven (11) financial literacy sessions which covers among others financial management, savings, the income cycle, growing money, and options for earning money. Session attendance is recorded in the HIV prevention and gender norms registers. The data are then captured in DHIS2 which is the program's web-based database. Provision of primary package sessions is therefore expected to require a minimum of six months.

2. Methods

2.1. Study Design

This was a longitudinal, retrospective study using routine DREAMS program data extracted from the District Health Information System (DHIS2) project database. This database tracks beneficiary-level data longitudinally from enrolment in DREAMS until they graduate. Data for AGYW aged 10 to 24 years screened and enrolled in the DREAMS program and registered for the primary package that is HIV and sexual violence prevention, gender norms and financial literacy sessions from the 1st of April 2019 to 31st of March 2020 (before COVID-19) and 1st of April 2020 to the 31st of March 2021 (COVID-19 period) were extracted. Variables used in the analysis include age, district, school enrolment status, and vulnerability category of AGYW.

2.2. Study Setting

The study was conducted in three DREAMS districts which are Bulawayo, Gweru, and Mazowe; these districts implemented DREAMS program before and during the COVID-19 periods. Bulawayo is the second largest city in Zimbabwe and is in the Matabeleland region. Gweru district is located in Midlands province, and comprises of both urban and rural areas, with agriculture and mining being the main economic activities. Mazowe district is in Mashonaland

Central province, is predominantly rural and is characterised by commercial farming and mining activities.

2.3. Study Population

This comprised AGYW aged 10-14 years old enrolled in the DREAMS program and started the primary package sessions from 1st of April 2019 to 31st of March 2020 (before COVID-19) and 1st of April 2020 to the 31st of March 2021 (during COVID-19) periods.

2.4. Study Participants (Include Inclusion and Exclusion Criteria)

All AGYW enrolled in the DREAMS program and their details captured in DHIS2 from 1st of April 2019 to 31st of March 2020 (before COVID-19) and 1st of April 2020 to the 31st of March 2021 (during COVID-19) periods were included. AGYW outside the age range and the periods under review were excluded.

2.5. Sampling and Data Collection

All AGYW aged 10-24 years who were enrolled in the DREAMS program and registered for HIV prevention, gender norms and financial literacy sessions for the periods under review were included in the analysis. Data were extracted from the project DHIS2 database. Completion of primary package sessions was defined as beneficiaries who completed the HIV prevention, gender norms and financial literacy sessions during the period under review.

2.6. Data Analysis

De-identified, beneficiary-level data were extracted from DHIS2 database, exported to Microsoft Excel for cleaning, and analysed using SPSS (IBM SPSS Statistics for Windows, version 22 (IBM Corp., Armonk, N. Y., USA) to generate descriptive statistics. Chi-square test was used to assess differences in primary package completion rates between different categories of AGYW.

2.7. Ethical Consideration

The study was covered by the ZHI non-research determination protocol that was approved by the Medical Research Council of Zimbabwe (MRCZ/E/254). Routine program data were analysed, and beneficiaries' personal identification information were excluded from the analysis.

3. Results

3.1. Demographic Characteristics of Participants

Data for 52,300 AGYW enrolled in the DREAMS program and registered for primary package were analysed and the median age was 15 years (IR, 7). About 48% (25,083/52,300) of the AGYW assessed were aged 10-14 years, and 20.4% (10,665/52,300) aged 20-24 years old (Table 1).

Table 1. Characteristics of respondents.

Category		No. Of AGYW	Percentage of AGYW
Age group	10-14 years	25,083	48.0%
	15-19 years	16,552	31.6%
	20-24 years	10,665	20.4%
School enrolment status	In-school	34,074	65.2%
	Out of School	18,226	34.8%
District	Bulawayo	32,671	65.5%
	Gweru	9,444	18.1%
	Mazowe	10,185	19.5%
	Vulnerable AGYW	29,011	55.5%
Vulnerability category	PLHIV	149	0.3%
	Orphans	22,050	42.2%
	Young mothers	734	1.4%
	Young women selling sex (YWSS)	356	0.7%
	Total	52,300	100%

About 65.2% (34,074/52,300) of the AGYW were enrolled in schools.

3.2. Completion of Primary Package Among AGYW Before and During the COVID-19 Period

There was a drop by 1.7% in completion of primary package sessions from 96.8% (25,460/26,299) before to 95.1% (24,724/26,001) during the COVID-19 period. A small drop was recorded for the 10-14 years old AGYW from 96.4% (9,784/10,145) before COVID-19 to 96.3% (14,381/14,938)

during COVID-19. Young mothers had the biggest drop (11.4%) in completion of primary package sessions between the 2 time-periods. Orphans recorded an increase in completion of primary package from 95.6% (7,781/8,138) before to 96.8% (13,470/13,912) during COVID-19 period ($p < 0.001$). High completion rates for primary package sessions were recorded before than during COVID-19 period. (Table 2).

Table 2. Differences in primary package session completion before and during COVID-19 period.

	Proportion of AGYW who completed primary package sessions		χ^2	P
	Before COVID-19	During COVID-19		
Age-group				
10-14 years	96.4%	96.3%	0.497	.0481
15-19 years	96.9%	94.0%	80.272	<.001
20-24 years	97.4%	93.0%	110.351	<.001
District				
Bulawayo	96.7%	95.8%	16.513	<.001
Gweru	97.1%	96.0%	6.191	<.001
Mazowe	96.8%	89.0%	238.149	<.001
Classification of AGYW				
Vulnerable AGYW	97.3%	93.2%	281.779	<.001
PLHIV	100%	97.3%	2.111	.0146
Orphans	95.6%	96.8%	21.516	<.001
Young mothers	97.5%	86.1%	28.756	<.001
YWSS	100%	96.8%	2.548	.110
In-school or community				
In-school	96.9%	96.2%	1.248	<.001
Community	96.6%	93.4%	89.218	<.001
Total	96.8%	95.1%		

All districts recorded a drop in completion of primary package sessions with Mazowe district recording the highest drop from 96.8% to 89% ($p < 0.001$). Completion of sessions was also higher among people living with HIV (PLHIV) and young women selling sex (YWSS), although the difference was not statistically significant ($P > 0.005$).

3.3. Factors Associated with Completion of Primary Package Sessions

AGYW in-school were more likely to complete primary package sessions than those out of school (OR = 1.492 (95% CI

= 1.212; 1.697). Also, young mothers were 0.656 times less likely to complete sessions during COVID-19 period than before the COVID-19 period (OR = 0.656; 95% CI (0.598; 0.720).

3.4. Discussion

The study showed an overall marginal decline in completion of primary package sessions from 96.8% before to 95.1% during the COVID-19 period. Although there was a decline, the completion rate remains higher than the average 70% completion rate reported in FY20 by USAID on the impact of COVID-19 on DREAMS [11]. DREAMS

intervention under Zimbabwe Health Interventions (ZHI) had robust follow-up mechanisms for AGYW which promoted high retention. The program invested in training community cadres who are Out of School Community Facilitators (OOSCFs) and they stay in the same community with AGYW resulting in effectiveness of follow-ups of potential dropouts. Moreover, research has shown that the DREAMS intervention helps to reduce HIV incidence among AGYW thereby motivating them to complete the primary package sessions [12]. High completion rates were recorded among the PLHIV and YWSS; this is encouraging given that YWSS are at higher risk of contracting HIV. Completion of primary package sessions for the in-school component was higher as compared to findings from a similar study conducted in sub-Saharan Africa which recorded 79% completion rates during the COVID-19 period [13]. DREAMS in-school program is implemented by the guidance and counselling teachers and sessions are delivered to all students irrespective of vulnerability. There is also a component of education assistance for AGYW in school; payment of school fees and provision of uniforms helps to motivate them to stay in school and hence improve completion of primary package in the school set-up [14]. To counter the negative effects of COVID-19 induced school closures, the DREAMS intervention under ZHI implemented the innovative Community School Program (CSP) where retired teachers and unemployed college graduates were trained to provide HIV prevention and gender norms sessions in communities. CSP facilitators worked with AGYW within their respective communities, and this innovation optimized retention of AGYW within DREAMS. Primary package completion rates among the 20-24-year-old AGYW were like findings from a similar study conducted in Kenya among the same age-group, overall completion rates were lower than that for the 10-14 year-age-group [15]. The 20-24 years old comprises of working class, those married and some AGYW pursuing vocational or tertiary education which limit their participation in DREAMS primary package sessions.

Although COVID-19 pandemic affected the implementation of the DREAMS program, the assessment recorded a higher primary package completion rate compared to similar studies conducted on completion of similar packages in learning institutions during the same period [16]. An assessment conducted across Africa on the impact of COVID-19 on AGYW showed a gradual decline in accessing HIV prevention information, sessions, and health services. [17]. DREAMS intervention under ZHI used virtual platforms for mobilizing, sharing information and referring AGYW for services as well as tracking service completion. These strategies helped to record higher completion rates for the primary package during the COVID-19 period.

Completion of primary package was almost similar across all the three districts of Bulawayo, Gweru, and Mazowe. Although studies have shown that there is high mobility of young people to neighboring countries that is South Africa and Botswana especially for Matabeleland South province, completion of primary package remained high (above 90%)

under the DREAMS program. [18]. Despite Gweru and Mazowe districts having highly mobile populations comprising artisanal miners and commercial farm workers, primary package completion rates remained high. This can be attributed to the DREAMS program having trained AGYW to start income generating activities and tap into the existing opportunities, thereby motivating AGYW to complete the sessions during the COVID-19 period.

High completion rates of primary package were reported among young women selling sex (YWSS) and people living with HIV which is contrary to similar studies done in Zimbabwe and Tanzania where the completion rates were below 64% due to restricted mobility [19, 20]. Social asset building clubs, economic strengthening activities and start and improve your business (SIYB) trainings offered to AGYW who are living with HIV and those who are into commercial sex work motivated them to complete primary package sessions. The DREAMS program also offered edutainment through road shows, ball games, exchange visits, mentoring by DREAMS Ambassadors who are the DREAMS beneficiaries who made it into life through the program and they walked the talk of being empowered. DREAMS Ambassadors are highly motivated AGYW who walked the talk and rose through the ranks from being a beneficiary to a role model in the community. The DREAMS Ambassadors are selected from within the DREAMS program through exhibiting leadership skills. Their major role is bringing public awareness, motivating, advocacy for and empowering other girls and young women in the communities. Thus, involving DREAMS Ambassadors motivated AGYW to complete the sessions.

4. Conclusion and Recommendations

Completion of primary package sessions by AGYW in the DREAMS program during the COVID-19 period dropped by 1.7% but remained high (95.1%). The use of community cadres and virtual platforms helped to track AGYW up to completion of the primary package. We recommend scaling up the DREAMS HIV prevention primary package sessions delivery models employed during COVID-19 period which include community school program, active following up of AGYW through the program community structures and effective use of virtual platforms for following up program beneficiaries. Also, the study recommends improving session delivery strategies for young mothers to match the other categories of AGYW.

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