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Factors affecting caregivers' disclosure of HIV-seropositive status to their children: a case of Parirenyatwa Centre of Excellence, Zimbabwe

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Abstract

Introduction: About 5% of the 38 million people living with human immunodeficiency virus (HIV)/acquired immune deficiency syndrome (AIDS) worldwide are children aged less than 15 years. A significant proportion of caregivers living with HIV-seropositive children still fail to disclose their children's status to them due to a multiplicity of factors, leading to a high prevalence of preventable mortality among preteens and adolescents. Disclosure to HIV-seropositive children is critical in enhancing their standard of life.

Material and methods: A descriptive cross-sectional design was employed in this study. Data collection was carried out using structured interviews in May 2021 among 100 participants at Parirenyatwa Centre of Excellence. Statistical package for social science (SPSS) version 22.0 was used for data analysis.

Results: The study revealed that only 20 (20%) participants had disclosed the HIV-seropositive status to their children. Disclosure status was significantly associated with the relationship with child ($p = 0.043$), number of children taken care of ($p = 0.041$), child's age ($p = 0.012$), fear of child's response ($p = 0.021$), child enquiring on status ($p = 0.011$), and fear of psychological harm to the child ($p = 0.041$).

Conclusions: This study concludes that early HIV disclosure is critical in promoting adherence to treatment, while caregivers need to be empowered to disclose early. There is a need to formulate evidence-based guidelines and standardized operational modalities to support the disclosure of HIV-seropositive status to children. Collaborative management is significantly required in helping caregivers in the disclosure process.

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Key words: HIV, Zimbabwe, disclosure, caregiver, seropositive children.

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Introduction

Globally, a significant proportion of children with human immunodeficiency virus (HIV)-seropositive status do not know their own HIV status due to non-disclosure by caregivers. About 2 million people living with HIV are children aged less than 15 years [1]. Disclosure of HIV seropositivity to children remains an emotional challenge to caregivers. The main concern is spontaneous negative response, such as shame, labelling, and social isolation, which arise from members of society. Another issue is that after disclosure, there is no better access to social support, and children can appear to be permanently discouraged. Regardless of worry on social and psychological influence of disclosure to children, some studies in industrialized countries demonstrated that HIV-seropositive children manage well after disclosure than children who do not know their HIV-positive status [2].

Statistics showed that sub-Saharan Africa has the highest number of children who do not know their HIV-seropositive status, which significantly contribute to the high mortality among preteens and adolescents. Although HIV affects the immune system and the body cannot combat other diseases and cancers, children with HIV can grow up to live long, satisfying lives using correct combination of antiretroviral therapy (ART) and loving care. Since the discovery of HIV in 1983, important developments in the detection, treatment, and prevention of HIV infection have saved an estimated 9 million lives so far in the new millennium, but HIV/acquired immune deficiency syndrome (AIDS) remains one of the greatest public health problems in the world. Children and adolescents are particularly vulnerable, so diagnosing and caring for young people living with HIV bring unique challenges [3].

Most children under the age of 15 years have acquired HIV through perinatal transmission and require HIV treatment from the moment they are born, while few have been infected with HIV through adolescent risk activities, such as unsafe sex or injectable drugs. For their treatment to be effective, both populations of HIV-seropositive young people need personalized approaches, as HIV is a chronic but well-manageable disease. Highly active antiretroviral therapy improves patient's standard of life, but the treatment has to be continued lifelong, as the total cure has not been established. Cost of treatment, drug toxicities, interaction with other medications, persistence of inflammation, and acceleration of aging process, all warrant an urgent need for a total cure [4].

Numerous approaches and strategies have been proposed to achieve cure, but they are to be proved in human studies. The treatment cascade for people living with HIV starts with diagnosis, therapy, and access to care. For viral suppression, strict ART adherence, ART continuity, and persistence in treatment are necessary, and require patients, healthcare personnel, social workers, and practitioners to cooperate. Around three-quarters of adolescents living with HIV worldwide are those infected at birth [5].

There is a global program intending to end the AIDS pandemic by 2030, led by WHO and UNAIDS, a goal that will need both a greater focus on those already under treatment and a renewed emphasis necessitating a greater focus on preventing new HIV infections by 2030 [6]. The adolescent age group shows increasing rates of both HIV infection and HIV-related mortality, unlike perinatal infections and infections in older adults, where HIV infection and mortality rates are decreasing. Almost two-thirds of these new HIV infections and deaths occur among adolescents [7].

Effective prevention of new HIV infections in adolescents is a complicated problem, because the causes of HIV transmission differ in various cultural, social, economic, and geographical environments [8]. A wide range of preventive methods is necessary, including raising awareness of HIV/AIDS, its transmission mechanisms and behavioral components, supporting community-based and school-based sex education, increasing the use of male and female contraceptives, and increasing the uptake of voluntary male medical circumcisions. The implementation of lifelong ART was an exceptional approach for all pregnant women living with HIV to avoid mother-to-child transmission. For exposed newborns, antepartum ART prophylaxis is provided as a preventive measure for six weeks. Mothers without HIV viral suppression are being educated to avoid breastfeeding and to practice other feeding options if they are available [9].

Disclosure of HIV may be viewed as simply the process of disclosure of HIV status to a person, whether positive or negative. The index person normally discloses HIV status voluntarily, but it may also be reported by others with or without the permission of the person [10]. Regardless of the documented benefits of disclosure, the disclosure process continues to be an ultimatum. In recent times, the disclosure to HIV-seropositive children is of greater importance, as it enhances their standard of life. Disclosure involves teaching the child what HIV is and how it is transmitted to others. On ethical and clinical grounds, the Zvandiri committee with the help of WHO greatly endorse the disclosure to HIV-seropositive older school aged children, and also that the preteens should be informed incrementally in preparation for full disclosure to accommodate their cognitive abilities and emotional maturity [11].

Data from a resource country research indicates that it can have positive psycho-social and clinical benefits to educate children about their HIV diagnosis. These comprise enhanced compliance with corresponding higher chances of survival, while improving the maintenance of individual well-being, lowering cognitive impacts related to coincidental disclosure, and better anticipation of HIV in wider parts of the world [12]. Successful disclosure to HIV-seropositive children is paramount, as it will help children in the way they live with the virus daily, and how it will affect their social life choices, including management of their health, disclosure to significant others, and sexual choice. The UNESCO's HIV and AIDS strategy also reported that knowledge on own disease would allow them to coerce secure and healthier decisions, as these children grow into adolescent stages. Some conducted researches have proved that if full disclosure has taken place, children will be inspired

and will be able to overcome external adherence challenges, thus they will adhere to ART [13].

Sustained and optimal adherence is needed for ART to be successful [14]. Non-adherence in children is highly related to non-disclosure of HIV status. Poor adherence can lead to non-viral suppression and sometimes causing failure of treatment, thus lowering the chances of survival of these children. They can however transmit drug-resistant viruses to their sexual partners, if infected young people are non-adherent through unprotected sex, hence increasing HIV spreading [15].

The process of disclosure to HIV-seropositive children is encouraged to be performed in 2 levels, i.e., partial and full disclosure. Children should know why they visit the clinic so often and why they are taking medications, therefore they should be told the reason behind. However, disclosure is a process that starts with partial disclosure, where the child is just told that he/ she is taking drugs because of some germs in the body, not mentioning the word "HIV" and omitting some information with a clue of HIV. Subsequently, the caregiver has to assess the child's understanding and then continue to full disclosure stage, in which the child is told about HIV, explained how it damages the immune system, how it can be treated, and how it can be spread to others. Lastly, the child is told about his/her HIV status after understanding about HIV. This process of ensuring that the child understands what HIV is should be done by caregiver with the help of healthcare worker. Usually, partial disclosure starts at the age of 6 years, while full disclosure starts at the age of 9 years [15].

Child disclosure rates in sub-Saharan Africa differ greatly, fluctuating from 0 to 69.2, regardless of the WHO 2011 guidelines advising that between 6 and 12 years of age, the disclosure process must begin increasingly [16]. HIV-seropositive children underwent below the diagnosable initial stage following the introduction of highly active ART, which continually brings questions on the HIV disclosure that will help them live to letter adulthood. Several families are hesitant to talk about the truth of HIV and its progression with their HIV-seropositive children. Late disclosure of the disease can result in negative outcomes. Also, the absence of disclosure may lead to poor medication perception and cooperation as well as to a rise in cognitive and developmental consequences. As children grow up to become teenagers, the perception about their HIV status becomes very important for individual fitness sustaining and prevention of HIV in a wider community [14].

UNAIDS is aiming at the goal of achieving 95% of the world's HIV population to be aware of their HIV diagnosis, 95% of those people tested to be supplied with ART, and to achieve 95% of viral suppression among all individuals started on ART. In 2019, UNAIDS revealed that globally, about 81% of people were aware of their HIV diagnosis, 67% were receiving their treatment, and 59% had an undetectable viral load [17]. The first 95% and the last 95% are partly being affected by non-disclosure of HIV status to infected children. Therefore, having noticed that the goal has not been achieved, it came to the interest of the current researcher to determine factors affecting the decision to disclose to HIV-seropositive children aged between 6 and 15 years.

Child disclosure is helpful in reducing self-deprecation, supporting to be autonomous about their treatment. In Zimbabwe, there are no protocols available to help caregivers and health personnel to disclose to HIV-seropositive children. Most of parents lack knowledge of the disclosure process. This important information is very useful in constructing guidelines, helping caregivers in decision-making to disclose to HIV-seropositive children.

There is no standardized operational modality to assist with disclosure of the HIV-seropositive status of children aged 6 to 15 years in Zimbabwe. There are a lot of children living with HIV, who are reaching the age of 12 years without their parents fully disclosing their medical diagnoses (HIV status) and reason why they are taking medication. Globally, a study from India observed that only 14% of children were told that they are HIV-positive [18]. Locally, 3 studies were conducted in Africa, documenting that only a small number of HIV-seropositive children knew their status. In a study from Ghana, it was concluded that only 9% of children knew they are HIV-positive, with 13% in Nigeria, and 21% in South Africa [18]. In a study conducted in Zimbabwe, the full disclosure rate was found to be 26.9% [19]. Therefore, disclosure to HIV-seropositive children is one of the greatest moral values of their life.

Failure to address this area results in late or lack of disclosure of HIV status, which might lead to maladaptive grieving exhibited by anger and denial of medical diagnoses, and finally to non-adherence. This non-adherence will result in a reduced number of virally suppressed patients, leading to failure in achieving the last 95% of UNAIDS goal of attaining viral suppression in all people who are started on ART. However, conducting this study on factors affecting the decision to disclose HIV status to children living with HIV by their caregivers will improve the psychological adjustment of the child and promote treatment adherence. Also, adolescence will reach a transition stage, in which they are supposed to take responsibility for their health.

Moreover, if full disclosure has taken place at the correct stage or age group, children will adhere very well to their treatment because they will obtain all information they want to know about HIV, having access to psycho-social support.

In Zimbabwe, little has been published regarding factors affecting the decision to disclose HIV-seropositive status to children by their caregivers. Therefore, this study sought to determine factors affecting the decision to disclose HIV-seropositive status to children aged between 6 to 15 years at Parirenyatwa Centre of Excellence.

Material and methods

A descriptive cross-sectional design was applied in the study, conducted at Parirenyatwa Centre of Excellence, an outpatient clinic offering differential ART services to about 5,000 patients of all ages. The clinic is a separate specialty

department of Parirenyatwa Groups of Hospital, a referral hospital in Harare, Zimbabwe. This setting was selected because it is a referral hospital with a greater chance of meeting caregivers from different settings, therefore increasing generalizability to the national population. The current study population included caregivers living with HIV-seropositive children aged between 6 and 15 years, who are registered at Parirenyatwa Centre of Excellence. We excluded those who were seriously ill, psychologically ill, or disturbed. A simple random sampling method was employed to select 100 caregivers who participated in this study.

A structured questionnaire was used to collect both participants' socio-demographic data and information on other possible factors associated with non-disclosure. The instrument was pre-tested with 5 caregivers from the Centre of Excellence and 5 participants, who were not included in the 100 participant cohort interviewed to prevent a Hawthorn effect. Data were analyzed using the statistical packages for social science (SPSS) version 22.0 and presented in descriptive tables. A χ^2 test of association was conducted to assess the relation between disclosure status and other variables.

Ethical considerations

The study complied with the ethical principles, including informed consent, anonymity, confidentiality, and respect of all persons as well as justice and beneficence. Also, the study was ethically approved by the Joint Research Ethics Committee (JREC) of Parirenyatwa and the University of Zimbabwe Faculty of Medicine and Health Sciences (JREC approval number: 197/2021). The researchers sought permission to screen the caregivers of HIV-seropositive children in the waiting area of the Parirenyatwa Centre of Excellence as well as all the members of staff who were in charge of those participants. STrengthening the Reporting of OBservational studies in Epidemiology (STROBE) guidelines were followed in this study.

Results

Socio-demographic factors and disclosure

A total of 100 caregivers participated in this study. Of these, 9% were aged below 25 years, 10% were aged 25 to 34 years, 23% were aged between 35 to 44 years, and 58% were aged 45 years and above. Women accounted for 90% of the study participants, and 63% were married. Sixty-one percent of the participants reached secondary level of education, and majority (89%) of the respondents were Christians. Nearly half of the caregivers had more than 4 children under their care, and 70% of the respondents resided in the urban area. About 75% of the caregivers were taking care of one HIV-positive child, and 81% knew the HIV status of the child before the child knew.

Disclosure status was significantly associated with the following demographic variables: relationship with child ($p = 0.043$), number of children taken care of ($p = 0.041$), and age of the child ($p = 0.012$). Table 1 summarizes the socio-demographic results and disclosure.

All the study cohort ($n = 100$, 100% of the caregivers) believed that HIV disclosure is when the child learns that he/she is infected with HIV, a chronic condition that requires medication, and also knows that the virus can be spread to others. Fear of blame and fear of stigma affected disclosure in 100 caregivers (100%), while fear of child's response influenced disclosure in 80 (80%) participants. There were 5 (5%) caregivers with family, who have been excluded from social family gatherings, 2 (2%) of those with children who reported always being teased, 0 (0%) of those with children who stated being unfairly treated, and 75 (75%) of those with children who are always asking questions. There were 15 (15%) study participants who were afraid of psychological harm to the child, 100 of those who thought that the child is too young to understand (100%), and 83 (83%) of those who thought that the child will not be able to keep the diagnosis a secret. The number of caregivers who delayed disclosure because of the child's age was 98 (98%), while 12 (12%) parents caused a delay, 3 (3%) were relatives, and friends were 0 (0%). The number of participants who preferred disclosing the HIV status to their children between 6 to 9 years of age was 22 (22%), between the ages of 9 to 12 years – 35 (35%), and between 12 to 15 years of age – 43 (43%).

The following factors (Table 2) were significantly associated with HIV seropositivity status disclosure to the child: fear of child's response ($p = 0.021$), child enquiring on status ($p = 0.011$), fear of psychological harm to the child ($p = 0.041$), and fear of child's response ($p = 0.003$). Of the 20 (20%) children who had received HIV-positive status disclosure, seventy-five percent of the disclosures were done by healthcare workers and 65% of the disclosures occurred at the age between 13 and 15 years.

There were 67 (83.75%) caregivers who have begun to assess the child's readiness for disclosure, 25 (31.25%) of those who have taken any step to prepare the child, and 15 (18.75%) caregivers who consulted a healthcare worker about disclosure or making plan to disclose (Table 3).

Discussion

The study sought to determine factors affecting the decision to disclose the HIV-seropositive status to children aged between 6 to 15 years by their caregivers. Available statistics have shown that there are a large quantity of children living with HIV who are reaching the age of 12 years without their parents fully disclosing their medical diagnoses (HIV status) and the reason of taking medications. Furthermore, lack of disclosure of HIV status is resulting in maladaptive grieving, which is being exhibited by anger and denial of medical diagnoses, leading to non-adherence. This non-adherence results in a reduced number of virally suppressed patients, followed by failure in accomplishing the last 95%

Table 1. Socio-demographic factors and caregivers' disclosure to children with HIV infection (n = 100)

Socio-demographic variable	Disclosure status of child's HIV seropositivity status		χ^2, p-value
	Disclosed, n (%)	Not disclosed, n (%)	
Number of HIV-positive children being taken care of			
1	13 (65.0)	62 (77.5)	0.041*
2	5 (25.0)	18 (22.5)	
3 or more	2 (10.0)	0 (0.0)	
Relationship with child			
Mother	10 (50)	70 (87.5)	0.043*
Father	1 (5)	2 (2.5)	
Grandparent	9 (45)	8 (10.0)	
Age of child (years)			
6 to 9	3 (15.0)	50 (62.5)	0.012*
10 to 12	6 (30.0)	29 (36.2)	
13 to 15	11 (55.0)	1 (1.3)	
Period of discovery of child's HIV-positive status			
Before the child	8 (40.0)	73 (91.3)	0.093
On the same day	7 (35.0)	5 (5.6)	
After the child	5 (20.0)	2 (2.1)	
HIV status of caregiver			
HIV-positive	15 (75.0)	70 (87.5)	0.063
HIV-negative	4 (20.0)	9 (11.2)	
Unknown	1 (5.0)	1 (1.3)	
Belief about disclosure			
The child must know that he/she has a chronic condition requiring medication			
Yes	20 (100)	80 (100.0)	0.314
No	0 (0.0)	0 (0.0)	
The child need to know that he/she has a medical condition called HIV			
Yes	20 (100)	80 (100.0)	0.314
No	0 (0.0)	0 (0.0)	
The child must know that he/she is infected with HIV			
Yes	20 (100)	80 (100.0)	0.314
No	0 (0.0)	0 (0.0)	
The child need to know that the virus can be spread to others			
Yes	20 (100) 0 (0.0)	80 (100.0)	0.314
No	20 (100) 0 (0.0)	0 (0.0)	

Table 1. Cont.

Socio-demographic variable	Disclosure status of child's HIV seropositivity status		χ^2, p-value
	Disclosed, n (%)	Not disclosed, n (%)	
Factors affecting disclosure			
Fear of blame			
Yes	20 (100)	80 (100.0)	0.313
No	0 (0.0)	0 (0.0)	
Fear of stigma			
Yes	20 (100)	80 (100.0)	0.313
No	0 (0.0)	0 (0.0)	
Fear of child's response			
Yes	15 (75.0)	65 (81.3)	0.003*
No	5 (25.0)	15 (19.7)	
Experiences after disclosure of child's HIV status			
Exclusion from social gatherings			
Yes	4 (25.0)	1 (1.3)	0.085
No	16 (75.0)	79 (98.7)	
Child teased by other children			
Yes	2 (10.0)	0 (0.0)	0.142
No	18 (90.0)	80 (100.0)	
Child unfairly treated by other people			
Yes	0 (0.0)	0 (0.0)	0.355
No	20 (100.0)	80 (100.0)	
Child questioned in public about being HIV-positive			
Yes	10 (50.0)	65 (81.3)	0.011*
No	10 (50.0)	15 (18.7)	
Barriers faced during disclosure of child's HIV status			
Fear of psychological harm to the child			
Yes	2 (10.0)	13 (16.3)	0.041*
No	18 (90.0)	67 (83.7)	
Child too young to understand			
Yes	20 (100.0)	80 (100.0)	0.313
No	0 (0.0)	0 (0.0)	
Child unable to keep HIV diagnosis confidential			
Yes	10 (50.0)	73 (91.3)	0.054
No	10 (50.0)	7 (8.7)	
Factors delaying disclosure process			
Fear of stigma or discrimination from family/community			
Yes	19 (95.5)	79 (98.7)	0.001*
No	1 (5.0)	1 (1.3)	
Lack of knowledge on how to disclose			
Yes	5 (25.0)	10 (12.5)	0.024*
No	15 (75.0)	70 (87.5)	

**Statistically significant finding.*

Table 2. Disclosure process among caregivers who disclosed their child's HIV status (n = 20)

Details of the disclosure	Frequency, n (%)
Who disclosed to the child?	
Healthcare workers	15 (75.0)
Mother	4 (20.0)
Father	0 (0.0)
Accidental disclosure	1 (5.0)
Was the disclosure well-received by the caregivers?	
Yes	15 (75.0)
No	5 (25.0)
Age of the child at disclosure (years)	
6-9	1 (5.0)
10-12	6 (30.0)
13-15	13 (65.0)

Table 3. Results of caregivers on disclosure process among those who have not disclosed the child's HIV-positive status (n = 80)

Variable	Yes, n (%)	No, n (%)
Readiness to disclose		
Have you began to assess the child's readiness for disclosure?	67 (83.75)	13 (16.25)
Have you taken any step to prepare the child?	25 (31.25)	55 (68.75)
Have you consulted a healthcare worker about disclosure or making a plan to disclose?	15 (18.75)	65 (81.25)

of UNAIDS goal of achieving viral suppression in all people started on ART. Poor adherence will lead to non-viral suppression and sometimes causing failure of treatment, hence lowering chances of survival of these children. This also increases the chances of transmitting drug-resistant viruses to their sexual partners, if HIV-infected young people are non-adherent through unprotected sex, hence increasing the number of infections [15].

Socio-demographic factors and disclosure

Caregivers were predominantly females, and a quarter of the female caregivers were divorced. The study finding resonates with the prevailing social norms in the country, where the caregiving role is predominantly assigned to women, while in divorce or separation, children below the age of 18 years are under women's care. A similar study revealed that 96% of mothers had successful communication with their children regarding HIV/AIDS and sexual practices compared with fathers. Children are more open and closer to their mothers, hence discuss their treatment and their HIV medical diagnosis more willingly with their mother [20]. Our study revealed that the disclosure rate was 20%, and disclosure was predominately done through healthcare workers. The c^2 test of association revealed that the disclosure status was significantly associated with the following demographic variables: relationship with child (p = 0.043), number of children taken care of (p = 0.041), and age of the child (p = 0.012). Another study conducted in Zambia reported that 29.8% of children were fully aware about their HIV-seropositive status provided by their caregivers. It also showed that amongst the 29.8%, most of the children were disclosed by their mothers due to better relationship with the mother than the father. The absence of fathers in this study contributed to more frequent or successful disclosure occurrences by mothers [21]. Contrary to the current study results, another research demonstrated that the presence of mother or father in the process of disclosure did not enhance adherence, as evidenced by elevated CD4+ cells or decreased viral load [15]. HIV and AIDS programs supporting disclosure should address issues concerning the impact of relationship between caregiver and child, perceived age for disclose, and pay attention to those caregivers who are caring for an HIV-positive child for the first time.

Factors affecting the decision to disclose HIV-seropositive status to children by their caregivers

The majority of caregivers knew about the HIV status of their child before the child knew. This could be due to the fact that most of the infections were transferred in the perinatal period. This is in line with previous studies, which concluded that most children under the age of 15 years have acquired HIV through perinatal transmission and require HIV treatment from the birth, while few have acquired HIV through adolescent risk activities, such as unsafe sex or injectable drugs [4]. Caregivers were more likely to have known the child's HIV status beforehand in circumstances where the child was staying with grandparents. Children were more likely to stay with grandparents after losing one of the parents, mostly fathers. Our results are in agreement with another study reporting that 74% of children in Zimbabwe aged between 0 to 17 years were living with their grandparents, with most of the children losing one parent due to HIV and AIDS [22]. There is great need for programs that provide psycho-social and mental health support to grandparents who carry such a burden.

About 66% of the children in this research did not know their HIV-seropositive status. This could be due to the fact that most caregivers preferred to disclose the HIV-seropositive status to their children at the age of 12 to 15 years. Furthermore, in 98% of the caregivers, the age of the child was one of the most significant factors that affected their decision to disclose the HIV-seropositive status to their children.

Caregivers considered maturity before disclosure. A similar study reported that, out of 185 caregivers interviewed, 42% had not yet disclosed the status to their HIV-seropositive children, and the age of the child was found to be the most contributing factor. The main reasons for non-disclosure were that the children were too immature. Most of the caregivers were planning to fully disclose to their HIV-seropositive children when they reach the age of 10 years [23]. Another study concluded that only 29% of children between the age of 5 and 16 years were disclosed to, and the caregivers who did not disclose stated that their children were still very young to understand. Several studies reported consistently that status disclosure is delayed, with lower rates in younger children [24].

Caregivers who strongly believed in the benefits of disclosure were amongst the 20% who had disclosed the HIV-seropositive status to their children. This result is consistent with a similar study conducted in Zimbabwe, which reported that only 26.9% of children were completely disclosed, meaning that they knew how they contracted the infection and that they can spread the virus to others. Mature children were more likely to know their status [25]. Another research observed that the rate of disclosure to HIV-seropositive children was 35.8% among 120 HIV-positive caregivers of children between the ages of 6 and 17 years [26]. HIV-seropositive children with parents believing that disclosure will benefit the child were 10 times more likely to disclosed their HIV diagnoses compared with HIV-seropositive parents, who were not believing in the benefits of disclosure [26]. This is contrary to our study, in which all the caregivers believed in the benefits of disclosure, but only 20 of them started the disclosure process.

Seventy-five percent of children asked questions about why they are taking medication every day, and 15% of the parents could not disclose due to fears of causing psychological harm to the child and of being blamed. This is in line with another survey among 118 caregivers, revealing that the key disclosure constraints involved child's age, assumed cause of HIV, HIV-related shame, failure of children to sustain self-diagnosis, and anxiety of cognitive harm to children [27]. A research consistent with these findings was done in Ghana, and showed that most of the barriers to disclosure involved child's age, understanding of HIV cause, stigma related to HIV, child's incapacity to keep diagnosis a secret, and fear of psychological harm to the child [28]. The ability of the child to keep the diagnosis a secret was one of the barriers that affected 83% of the caregivers in the disclosure process.

There were 15 (75%) children who were disclosed by healthcare workers, and all of the caregivers approved the disclosure process. This is in line with yet another study done in sub-Saharan Africa, which concluded that the support of healthcare workers is of great importance to the caregivers during the disclosure process. To reduce stigma in young adolescents, 60% preferred disclosure by healthcare workers, and emphasized support from peer groups. For disclosure to happen in a patient-centered approach, healthcare workers need ongoing training and sufficient resources [29].

The results revealed that HIV sero-status disclosure to the child was significantly associated with the fear of child's response ($p = 0.021$), child enquiring on status ($p = 0.011$), fear of psychological harm to the child ($p = 0.041$), and fear of child's response ($p = 0.003$). This shows that health professionals who take care of HIV-positive women, along with the continuum of care from pre-pregnancy, during pregnancy, and post-delivery, should be competent to provide adequate education and psycho-social support to build confidence in caregivers to disclose to their children early, and be able to support the children in their HIV status. Moreover, interventions on HIV and AIDS should effectively prepare households and communities to accept seropositive status of the child to reduce stigma and discrimination.

Conclusions

Findings from this study revealed that there is a need to formulate evidence-based guidelines and standardized operational modalities to assist with disclosure of the HIV-seropositive status of children. Furthermore, collaborative management is greatly needed in helping caregivers in the disclosure process. This is because when children reach their transition stage, in which they will need to take care of themselves in the absence of their caregiver, they will continue to adhere well to their treatment. Hence, there is a chance for a future generation with 95% of people who are virally suppressed, meeting the 2030 goals of UNAIDS.

Health institutions in Zimbabwe and other low- to medium-income countries can consider incorporating group discussions and counselling sessions for caregivers with healthcare personnel about the disclosure process and educate them on the process of disclosure. Introduction of inter-professional collaboration of different specialties is crucial, especially the inclusion of social workers and clinical psychologists, in the process of disclosure to address the social aspects of the caregiver and the child.

Disclosures

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