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Research Article

Factors Influencing Retention of HIV/AIDS Care and Treatment among Adolescents Living with HIV in Mkuranga District Tanzania

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Abstract

Background

The estimated number of HIV/AIDS deaths among adolescents in the world increased by 50% in 2005 and 2012, despite significant decreases in all other age groups.

This study sought to explore factors influencing retention of adolescents living with HIV/AIDS into HIV care and treatment services in Mkuranga district Pwani region in Tanzania.

Methodology

A descriptive cross sectional study using qualitative method of data collection was carried out in Mkuranga district in Tanzania. Twenty eight adolescents aged 10-19 years living with HIV/AIDS were interviewed by using in depth interview guide. The in-depth interviews were audio recorded, transcribed and then translated into English. Transcribed data was manually analyzed thematically. The themes were derived by focusing on the meaningful units, from codes that were developed as well as sub-categories and categories. Through constant comparison of information at various stages we derived themes as presented in results section.

Results

Family support and peer influence were mentioned as potential sources of social support which influence retention of HIV positive adolescents on HIV care and treatment. Adolescents living with HIV/AIDS perceived HIV/AIDS care and treatment services as services which should have friendly environment. Additionally there are benefits of being retained on care and treatment. Causes of poor retention on care that were reported among adolescents who have missed three consecutive months and above were; unfavorable school timetables, peer influence, and lack of family support especially from caregivers. Reported perceived benefits of attending CTC and being retained on HIV care and treatment were improvement in health as a result of adhering to ARVs.

Conclusions

In order to improve adolescent's retention on HIV/AIDS care and treatment services, factors influencing their retention should be addressed. It is good to design strategies to address all causes of poor retention by taking into account adolescents living with HIV's perception of the care and treatment and actively involve them in their HIV care and treatment services.

Key Words: Retention in HIV care and treatment; HIV/AIDS; adolescents; Tanzania

List of Abbreviations: ARVs-HIV drugs are called antiretrovirals; ART-Active Antiretroviral Therapy; AIDS-Acquired Immune Deficiency Syndrome; CTC-Care and Treatment Center; DH-

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District Hospital; HIV-Human Immunodefiency Virus; IGA-Income Generating Activities; LTF-Lost To Follow up; MUHAS-Muhimbili University of Health and Allied Sciences; PLHIV-People Living with HIV; TASO-The AIDS Support Organization.

Background Information

Adolescence refers to the years (10-19), of transition from childhood to adulthood [1]. During this period young people develop new patterns of behavior, skills, knowledge and decisions which mould their future. Adolescence is the time which is full of risk behaviors and life challenges that include but not limited to; early marriages, lack of education, lack of access to reproductive health education, school drop outs, and early parenthood as others are head of households [2].

Globally, the number of children who are under 15 years who are living with HIV/AIDS increased from 2.0 million in 2001 to 2.5 million by the end of 2010 [3]. Most of these children 90% were in sub Saharan Africa, where the number increased from 1.8 million to 2.3 million over the same period [4].

The world is failing the 2.1 million adolescents aged 10–19 years around the world who are living with HIV, in terms of providing treatment and retaining them in care. Only a small proportion of adolescents who are long-term survivors born with HIV/AIDS have access to ARTs, and most of them receive it through limited numbers of specialized centers in urban and peri-urban settings where the retention rates are also poor [I].

Between 2005 and 2012, the estimated number of HIV/AIDS deaths among adolescents in the world increased by 50%, despite significant decreases in all other age groups. This increase in deaths may be due to low ARVs treatment coverage, poor retention in HIV services, low HIV testing and counseling coverage [5].

Globally, deaths due to HIV/AIDS have decreased by 30% among the general population but increased by 50% among youths [4]. Most of the adolescents depend on their parents for transport fare to clinics monthly. So here their role is to remind and insist care givers/parents to prepare the budget for that. They need to do disclosure of their status to friends and community members for social support. They are trained on life skills, ARTs adherence and good behavior, adolescents need to listen and practice what they are told by adults, to promote their health and prevent new infections. For those with the capacity to lead others, they need to be role models, peer educators and leaders to their fellows living with HIV/AIDS. Therefore, there is a need to train and capacitate adolescent leaders to play this role [4].

In United States, the Center for Disease Control and Prevention, estimated that 26% of the approximately 50,000 new HIV infection diagnosed in 2010 are among youths in the US 13 to 24 years. HIV prevalence is higher among minority adolescents aged 13- 24 years, more than those who are above 24 years of age. Many HIV infections among youths are due to exposure to risk sexual behaviors [6].

Patient's age may affect adherence and retention into HIV/AIDS care. For example, some adolescents and young adult HIV/AIDS patients; in particular, have substantial challenges in achieving levels of adherence necessary for successful therapeutic outcomes. HIV infected adolescents represent a heterogeneous group in terms of socio demographics, mode of HIV infection, sexual and substance abuse history, clinical and immunologic status, psychosocial development, and readiness to adhere to medications [7]. Similarly, Geng et al.[8] revealed that age is a contributing factor affecting retention. Also a study by [4] on retention of HIV/AIDS positive adolescents in care, treatment and support programs in Uganda shows that the risk of non retention is greater in older adolescents (15- 19 years) than in younger adolescents (10- 14 years).

The way the services are provided to adolescents can motivate or hinder adolescents to be retained on HIV care and treatment [4]. It was revealed by [4] that those adolescents, who refill their drugs at health facilities, have a high risk of non retention compared to those who receive their drugs in community distribution points. They further suggested community based ARTs distributions and early diagnosis of HIV for retention of adolescents in HIV/IADS care and treatment. This shows that there are factors within the HIV care and treatment services which adolescents do not prefer. This should be pointed out so that HIV care system to adolescents improves their preferences to attract them remain on care for life time.

Geng et al. [8] in their report cited a study from Kenya targeted program providing social support for youth showed that retention was better at the intervention clinic 70% compared to 55% at the general site for the same age group [9]. In the intervention sites the youth were provided with ARVs at community clubs where they also receive psychosocial support.

A good number of adolescents living with HIV/AIDS in Tanzania do not know their status; hence they don't know what to do for their health. Parents and guardians face challenges in disclosing HIV status to adolescents due to stigma associated with HIV/AIDS. They are told to take medications for other reasons, if not followed up their adherence and retention into care and treatment is very poor compared to other groups. At the age of 4-6 years the parent should start mentoring the child about HIV being a chronic disease and why the child is taking medicine every day. Disclosure can happen at the age of 7-11 years [10].

For good clinical, physical, survival and social outcomes, retention in HIV/AIDS care and treatment for HIV positive clients is important. In Tanzania, efforts to improve adolescent retention are going on; there is no national strategy to address the challenge of retaining adolescents in care and treatment services. There are friendly clinics, and adolescent clubs in some of the CTCs which are donor funded. These efforts serve as psychosocial support to adolescents, they learn more about HIV treatment and life skills. This is an avenue to discuss and socialize with others about social life, preventing new infections and positivity and make them love going to care and treatment centers as scheduled [11]. Club activities include; health education, practical session of school works, cooking and drinking nutritious foods like porridge, making stories and experience sharing, friendship building and helping each other, remind each other about drug adherence and trace their fellows who do not show up during clinic days [11].

Over sixty five percent (65%) of people living with HIV in Mkuranga are youth aged 15- 45 [12]. From June 2013 to March 2015, among 250 pediatrics and adolescents (under 15 years) ever enrolled on care at Mkuranga district hospital CTC, 109 (44%) are still on care [13] while 56% are not [14].

In Tanzania HIV prevalence among youths of 15- 24 years is 1.2% for men and 2.7% for women, while the overall HIV prevalence in the country is 5.1 [15]. HIV positive adolescent is increasing fast, and mainly is the result from mother to child transmission of HIV and a few from exposure to risk behaviors. An estimated 11.2% of people living with HIV in Tanzania are young people aged 15-24 years [13]. Children and adolescent, who are infected by HIV in Tanzania, 26% are on ART [10]. In Pwani region 6.4% of the children (<15years) are on ART as compared to 94% of adults on ART [11]. This shows that initiation of ART among less than 15 years HIV positive children is low; this can be contributed by poor retention of these children on HIV care and treatment. This is shown by 25% of adolescents, who have remained on care after 12 months follow up [14]. According to new ART guideline all under 15 years HIV positive children are supposed to be on ART [10].

According to Messer et al. in Geng et al. [7], retention in care implies remaining connected to medical care once entered. For positive clinical care outcomes, HIV positive patients have to remain connected to medical care for life time; patients are obligated to visit clinics, usually monthly or as scheduled by a health care provider depending on the condition of the patient. Retention is considered at 14 days, 30 days, 90 days, 6 months and one year since enrollment in HIV care and treatment services. A patient who has not showed up for 14 days and 30 days is regarded as missed appointment and a patient who will not show up for 90 days and above is regarded as lost to follow up [8].
Retaining people living with HIV/AIDS in medical care is a major priority for both providers and public health organizations. Since the advent of Highly Active Antiretroviral Therapy (HAART) in 1996, health outcomes have greatly improved for persons living with HIV. Sustainable improvement depends on connecting HIV-infected patients and maintaining them in continuous care. Retention on care gives the opportunity to implement preventive health care interventions and health promotion through continuous health education and counseling which is provided at HIV care and treatment centers. These efforts may cut down HIV transmission and improve public health by reducing the population burden of HIV disease in the community [16].

Retention of adolescents on care is impinged by high level of HIV/AIDS related stigma that exists in the community as well as the social, cultural and life style factors [17]. There are limited studies that demonstrate the retention pattern of this particular age group. Previous studies demonstrate that stigma, social support, disclosure, discrimination, work/child care, transport to clinic, poverty, models of care, CD4 level, sex, toxicities of ARTs, feeling well, alternative medicines, and younger age, affect retention on care and treatment [8] According to [18] found that stigma, discrimination, and exclusion fuel the HIV epidemic and limits access to care and treatment.

Little is documented on the reasons that affect retention of HIV positive adolescents aged 10-19 years on care and treatment services in Tanzania. Up to March 2015 in Pwani region, Mkuranga district there were 3, 284 children and adolescents of 0-15 years enrolled into care and treatment centers in the region [14]). Retention of adolescents aged 10-19 years in Mkuranga district is 25% [14]. Therefore, this study aimed to explore the factors influencing retention of adolescents living with HIV/AIDS into HIV care and treatment services in Mkuranga district Pwani region.

Materials and Methods

Study Design and Setting

A descriptive cross sectional study using qualitative method of data collection was applied. The study was conducted in Mkuranga district and involved CTCs available in Mkuranga district; these are Mkuranga district hospital, Mkamba, Kilimahewa, Kisiju health centers, Magawa and Njia Nne dispensaries.

Mkuranga district was selected because of; high HIV prevalence (5.9%) which is above national HIV prevalence 5.1% [15]. Among people living with HIV in Mkuranga over 65% are youth age 13- 45 [12] .The retention rate is 25% for adolescents (10-19) with 24 months from enrollment [14]. Mkuranga district is one of the seven districts in Pwani region of Tanzania. It is bordered to the north by Dar es

Salaam to the East by the Indian Ocean, to the south by Rufiji District and to the East/West by the Kisarawe District. According to 2012 Tanzania National Census, the population of the district was 222,921. The district covers an area of about 2,432 Kms^2. The district has 4 divisions, 18 wards and 109 villages. The District has one Hospital, 3 Health Centers and 38 Dispensaries.

Study Population

HIV positive adolescents aged 10- 19 enrolled into care and treatment centers in Mkuranga district, Pwani region. This group was selected because of low HIV CTC retention rate among them.

Sampling Procedures

Pwani region and Mkuranga district were purposively selected. One district hospital, 3 health centers and 2 dispensaries from Mkuranga district were purposively selected to participate in this study. These are Care and Treatment Centers in which HIV positive adolescents are enrolled. The selected facilities were Mkuranga district hospital, Kisiju, Mkamba, and Kilimahewa health centers, dispensaries were Magawa and Njia Nne.

Furthermore, purposive sampling was employed to select HIV positive adolescents who adhere to their appointments to participate in this study. The reseacher attended adolescent clinics, those who came for their routine clinics were targeted to participate in this study. The adolescents were selected purposively to participate in in depth interviews when they came for clinical care after they have consented. A total of twenty eight participants participated in this study these included; nineteen (19) adolescents who came for their routine clinics were included in this study. Also nine (9) adolescents living with HIV and who don't adhere to appointment dates were selected and participated in this stud study after consented. This sample size depended on information saturation. For lost to follow up adolescents, CTC data clerk pulled their names and address from CTC data base and then follow up was done by peer educators via phone call and home visits to invite them for interviews. All respondents were informed about the objectives of the study, involuntary participation, and asked for their willingness to participate, and then they signed consent forms.

Sample Size

Twenty eight (28) HIV positive adolescents aged 10- 19 were interviewed using field guide. Nineteen (19) were adolescents who adhere to their appointment dates, and 9 were adolescents who are lost to follow up. Adolescents, who are lost to follow up, were obtained for interview after being tracked by peer educators through phone calls and home visits by peer educator and CTC health workers.

***Table 1**: Age and sex composition of respondents*

	Categories of respondents	*Age*	*females*	*Males*
Voice 1-19	*Adolescents living with HIV who adhere to their appointment dates.*	*10-19*	*10*	*9*
LTF Voice 1-9	*Adolescents who don't adhere to their appointment dates.*	*10-19*	*4*	*5*

Data Collection Tool

Information was gathered through in-depth interview guide from the respondents who are HIV positive adolescents attending clinic as scheduled and those who did not attending clinic for 90 day and above (Lost to follow up). Orientation to 3 research assistants for 1 day on contents and research procedures were done by the principal researcher before data collection. Data was collected by using in depth interview guide and the interviews were audio recorded and field notes were taken. For confidentiality respondents were interviewed in a room with no destructions and confidentiality was assured in the consent form and verbally consented before starting the interview. Participants were also informed about the confidentiality that what they tell will remain confidential to researchers and no names were taken. Lastly they were informed that the notes will be taken during interviews and audio taped by a research assistant which they consented.

Data Analysis

Data analysis was done manually. Transcription of audio data was done and then transcripts were translated into English. Information in transcripts was categorized to develop codes. Themes were developed from codes and compiled to form main themes. Data was synthesized by producing sub themes and the emergent themes.

Ethical Considerations

Ethical approval was obtained from the Muhimbili University of Health and Allied Sciences Institutional Review Board. After obtaining ethical clearance, permission was sought from Mkuranga district executive director, district medical officer, district HIV/AIDS coordinator and from care and treatment centers (CTC) in charges. Informed consent from adolescents was obtained upon understanding the essence of the study. Confidentiality was assured by removing personal identifiers from the gathered information.

Findings

Introduction

Twenty eight (28) HIV positive adolescents aged 10 - 19 were interviewed. Among them nineteen (19) were adolescents who adhere to their CTC appointment dates, among them ten were females and nine were males. Nine (9) were adolescents who were lost to follow up, among them five were males while four were females. The analysis showed main themes as follows:

Adolescent's Perception of HIV Care and Treatment Services

Respondents explained how they perceive HIV care and treatment service and how it motivates them to follow their appointment dates. They perceive HIV care and treatment services as services which should have friendly environment and there are benefits of being retained on care and treatment.

Refreshments which are provided at Mkuranga district hospital CTC, ARV drugs, generosity of service providers, time to play and relax from home chores were the major motivations to visit CTC explained by respondents who adhere to their appointment dates. One of them said:

"The generosity of the nurses who provide CTC services make me not even to think of missing...because at home I don't have enough time to play, so by coming here at least I can get two to three hours for playing." (Voice 19).

The LTF respondents had knowledge on why do they need to attend CTC every month. A good number of adolescents demonstrated good knowledge on their health life and benefits of being retained on care. This is because they all know their HIV status. Among those who attend CTC as per their schedules mentioned benefits of attending CTC as; taking drugs and improving their health. Those who do not attend CTC knew the benefits but they are faced with challenges to adhere to their appointments. Among benefits mentioned were:

"I am benefiting with heath education which is provided here and I use it to educate my fellows who are scared about testing for HIV at home, to be healthier, and feel that I am among the healthy people." (Voice 5).

"A person living with HIV must attend CTC in order to get medications because taking drugs is his/her right, as advised using ARV can make a person healthy as before. But if you don't come to CTC you are destroying your life because attending CTC as scheduled makes a person healthy… nobody will know you are living with HIV". (voice 19).

Potential Sources of Social Support which Influence Retention of HIV Positive Adolescents on HIV CTC

Family Support

It was reported by respondents that, families are sources of social support to adolescents living with HIV. Family support financially and in terms of nutrition, influence retention of adolescents in care and treatment. Adolescents who attend CTC as scheduled, get support from their families in terms of nutrition and financial, their families make sure that there is something to eat. Adolescents understand the importance of balanced diet to their health. Financial assistance is provided in terms of transport cost hence the adolescent is sure of attending CTC. Families play a role of social support and influence retention of HIV positive adolescents on care by providing frequent remainders to adolescents on the appointment dates and adherence to drugs. For instance one adolescent who stays with her aunt and adhere to appointment dates said;

"She always makes sure that, I get enough food to stay healthy like, in the morning she always give me nutritious porridge, there after I take medication then tea and in the afternoon vegetables."(Voice 15).

A female adolescent who stays with the family of her brother said:

"They remind me time to take drugs and incase I forget, in the morning if I wake up late they come to wake me up and make sure I cook and eat so that I can take drugs on time." (Voice 7).

Peer influence

Adolescents living with HIV influence each other to adhere to appointment dates. Due to friendly environment available at CTC clinics, adolescents are eager to wait for the next appointment date to meet their fellow adolescents. They declared that, friends they have at CTC give them strength to attend CTC by making them feel that they are not alone in the world living with HIV. They mentioned the presence of adolescent clubs at Mkuranga district hospital CTC strengthens the sense of togetherness among HIV positive adolescents. In adolescent club, adolescents living with HIV get an avenue to learn, share experience form each other and play. One of the respondents who attend CTC as scheduled explained:

"What I prefer when I attend at CTC is that sense of togetherness with others which is brought by chatting, sharing experiences, learning with other adolescents and playing games." (Voice 19).

Perceived Causes of Poor Retention among Adolescents with Three or More Missed Appointments

Unfavorable School Timetables

Among adolescents who are at school and have missed their appointment dates mentioned school time tables as a contributing factor, because the adolescent has to follow school time table and at the same time adhere to his/her appointment dates. They mentioned unfavorable school timetables contribute to poor retention on HIV care and treatment because clinic days are done on week days, at the same time these are school days, a child has to choose between school and attending CTC. They fear to ask permission every month to attend CTC as they have not disclosed their status at school for fear of stigma and discrimination. A big number of them end up missing their appointments at CTC and attend school especially during examinations. One of them explained:

"Service providers have instructed us to be at CTC, at 08:00 am. Sometime the appointment date may fall on Fridays where at that particular time; I am supposed to be at school. I have to ask for permission from School using other excuses, so that I can visit CTC, as my genuine reason for visiting the hospital is not known at school." (Voice 12).

Peer Influence

All of the interviewed adolescents showed knowledge on the importance of taking ARVs and the benefit of being retained on care. They acknowledged that they were taught at CTC and it is of good value if they will be reminded at every clinic day. A respondent who is lost to follow up declared that it is because of negligence that he does not take drugs.

"The time I was told to take medicine is different from the time I take my medicine. That is why sometimes when I take these medications at a wrong time I get some side effects. My body aches and I get rashes on my face. Sometimes the following day I don't take medications, so when my appointment date comes, I still have a big stock of drugs, I decide not to go to CTC." (LTF voice 1).

For those who have missed their appointments that peer pressure causes poor retention on HIV care and treatment, especially for those who have not disclosed their HIV status to their friends. Adolescents feel uncomfortable in front of their peers if they are different from others. This feeling makes them to fall in peer pressure. In a group, adolescents are pulled in the majority side this makes them not to adhere to their appointment date and join their friends in other social activities. For example, taking medications everyday and going to clinics every month makes them uncomfortable in front of other adolescents with unknown status. Adolescents who adhere to appointment dates and those who don't face the same challenge of peer pressure but those who have good attendance declared ability to resist peer pressure. One of the adolescents who adhere to appointment dates had this opinion;

"Sometimes friends can convince you not to come to CTC, to be in a relationship with someone or to go to a place you don't know well, I always think of it first."(Voice 12).

"My friend tricks me into doing what she wants. On my appointment dates, she will always ask me not to remain at home nor attend the clinic, Instead I should go to her place for chatting". (LTF voice 7), said a female adolescent who doesn't adhere to appointment dates due to peer pressure.

Adolescents with poor retention blame health care providers for violating medical ethics by disclosing their HIV status to other people and the use of unfriendly languages to adolescents. This is contrary to those who attend clinic as scheduled as they said, CTCs has friendly environment.

"Service providers at CTC have a habit of listening to my in law. If I did not attend CTC, they will call him to say that, today they didn't see me. My in law will tell them that is how I am; when I attend CTC, the service providers will accuse me of not attending CTC on my previous appointment date in front of other people."(LTF voice 1).

Lack of Family Support

Adolescents living with HIV especially orphans complained to lack family support from families they stay with. Among 9 adolescent who don't adhere on their appointments dates interviewed, 8 (89%) are orphans hence they are in the hands of caregivers. They said care givers don't see this as their primary role to care for adolescents left in their hands. Lack of family support contributes to poor retention among HIV positive adolescents. Among adolescent who don't adhere to their appointment dates interviewed, they declared that their poor retention is contributed by lack of support from family members in terms of nutrition and transport fare to CTC.

"There is no support from family members, relatives do not take care of me ever since my parents passed away. I get my bus fare for clinic after working for people". (LTF voice 8).

Adolescents who are not sure of getting food support from their families not only they have poor retention at CTC but also at school. They understand that for them to be healthy they need to take nutritious foods. When the family does not support them to get nutritious and

enough food it is a risk for their retention and adherence to ARVs. One adolescent among those who have missed their appointments dropped out of school because of getting small amount of food or finds there is no food left for him when he returns home from school. This was due to large volume of the family and no one was responsible to make sure there is enough food for him when he is back from school. This puts him at risk of retention as it seems there in no one to follow him up. He said;

"I used to go to school when I came back home most of the time I could miss food or find a little amount of food of which could not be enough for me despite being on medication. I had to stop going to school and stay at home and be there when food is ready." (Voice 18).

Distance to the facility and poverty of the adolescent families contributes to poor retention of adolescents on care, this is because caregivers/parents cannot afford transport fare especially those who stay far from the health facilities. For example one male adolescent who is also an orphan at clinic explained the incidence:

"Like yesterday, I went to my uncle to ask for a bus fare to attend CTC. I told him, my appointment date to return to CTC is tomorrow and my pills are finished. His response was, go ahead, you have money. I told him I don't have money as I am not employed. He told me that, it rained yesterday and he didn't get money from his business of transporting passengers by using a motorcycle. I had to return home, lucky enough my aunt went to a neighbor and borrowed one thousand shillings which I used for bus fare today." (Voice 18).

It was revealed that among adolescents who don't adhere to their appointment dates, their day to day life within the family is not in harmony, this contributes to their poor retention. In these families adolescents are blamed by caregivers for a lot of bad things happening at home. This makes the adolescent to see himself /herself as useless to the family having in mind that he/she is living with HIV. For example, as a result of HIV some adolescents living with HIV are weak; one adolescent said he is judged by his care givers as lazy. This poor relationship within the family leads to adolescents living with HIV to shift from one care giver to the other looking for harmony and peace of mind which also contributes to their poor retention on HIV care. One of the adolescents who do not adhere to his appointment date argued that:

"I can say my care givers have contributed to my poor attendance at CTC. They blame me for all negative issues happening at home. For example, if any item is lost, they would suspect me directly. It makes me sad every time. And whenever this happens, I run away to Dar es Salaam for some time, in order to relax. I usually return home when I feel good. My care givers say I am lazy, naughty and ill mannered: I always tell myself its fine, this is how it is when you are HIV positive and orphaned". (LTF Voice 1).

Respondents, who don't adhere to their appointment dates, had frequent sweating and long silence in between the interview. To calm the respondent down the researcher had to make little comedy/jokes and make other stories or change the venue to a place the adolescent preferred, like under the tree or far from the CTC. This shows they have low self esteem and one can put doubt on the information they provide. In providing suggestions adolescents with poor retentions asked for support from other well wishers so that they can go back to school or attend any short course on vocational training and wanted to know more about prevention of new HIV infections, sexual and reproductive health.

Unstable families impact onto the health of adolescents, when parents separate adolescents can feel the change within their life. This causes changes in love, caring and attention contributes to poor retention. An adolescent with poor retention to CTC experiences this and said he has lost even the meaning of going to CTC as nobody cares for him, even his mother does not care anymore, because she puts more attention to her husband. He had the following to explain:

"My parents are divorced; mother does not love me anymore. She is married to another man, when she buys fruits, eggs; she says they are for my step father…mhh I lost the hope for living." (LTF voice 6).

Caregivers have a primary role of reminding and guiding the adolescent throughout his/her medications. Respondents who are at early adolescence (10- 14) are not fully involved in their health life, they explained that care takers are the ones staying with drugs. They only take medication when they are given by care takers. When the care taker does not perform his/her role of supporting, reminding the adolescent on attendance to CTC contributes to poor retention of the HIV positive adolescent. Some of adolescents with poor retention stated:

"When it reaches my CTC appointment date, mostly, grandmother has a lot of drugs remaining; therefore I only attend the clinic when my drugs are finished." (LTF voice 4)

"My CTC1 card is kept by my mother or my grandmother, so I don't know my appointment dates. I usually wait until they tell me to go to clinic." (LTF voice 7).

Perceived Benefits of Retention on HIV Care and Treatment

Adolescents demonstrated good understanding of health benefits they

get by taking ARVs. Others confessed that, they can see improvement in their health after they were initiated on ARV. Therefore, the availability of ARV at CTC was mentioned as a contributing factor to retention of HIV positive adolescents on care. To show the understanding of the importance of ARV one adolescent said;

"…I would like ARV to be added and the government to make sure we don't miss our doses". (Voice 12).

"…staying without taking ARVs I Don't feel well , and I cannot hear someone speaking clearly that is why I have to come regularly to take medication…a person living with HIV must take ARVs to suppress the HIV virus."(Voice 15).

Adolescent's Perspectives on Their Roles in Influencing HIV CTC Retention

Knowledge on their role as HIV positive adolescents was well demonstrated by adolescents living with HIV. They insisted on taking right doze and at the right time every day. Adolescents understand that listening to health care workers' and parents advice on their health will keep them health.

"My role is to take the medicine correctly, to remind parents or guardians to remind me take drugs even if I've forgotten so that I can be in good healthy." (Voice 4).

Discussion

Introduction

This study explored factors associated with poor retention among adolescents. The major findings of this research will help to bring awareness and add knowledge on the subject matter to governments, development partners, communities, families and individuals to develop interventions that will help adolescents living with HIV to increase utilization of HIV services for life and to improve their retention for their health.

Potential Sources of Social Support which Influences Retention of HIV Positive Adolescents at CTC

This study finding has indicated that in families where caregivers are responsible, adolescents are encouraged to attend CTC, provided with transport cost and insisted on good adherence. Adolescents respond very well and are retained on care and treatment services. When faced with peer pressure adolescents from these families with support can resist peer pressure. Unlike adolescents from families without support, these have low self esteem, have self stigma, don't not have knowledge on sexual and reproductive health, has lost hope in their life hence they don't see the importance of attending CTC. It was very difficult for them to communicate their perspective, they were not free for fear of health care providers or their care takers will get the story. This is because the relationship between these adolescents and their families is not good. This finding is also linked with the assumption in health belief model that, cues to action which includes internal and external factor influences an action [19].

The finding is consistence with [4] in Uganda, they found that the high levels of retention of adolescents in TASO treatment programs could be due to the intensive resources geared towards targeting the whole families with HIV testing counseling, treatment and support services. And [20] revealed that many felt fulfilling responsibility to their children formed a motivating factor for retention in care.

Perceived Causes of Poor

School Timetables Vs CTC Appointments Impacts Adolescent Retention

At the age of 10-19 most of the adolescents are in school. During the in depth interviews all adolescents who adhere to their appointment dates and those who don't blamed contradictions between school and CTC timetable. This is because they have not disclosed their HIV status at school so they have to lie on the reasons for permission to attend CTC. This does not give them peace of mind. They are needed to attend CTC every month and on the same days they are supposed to be in school. Other parents/care givers insist them to go to school while they go to clinics to pick drugs for them. This is not recommended as the clinician will not be able to see the patient for other clinical examinations. Others choose to go to clinic while they miss lessons which are going on that day at school. For those attending CTC every month they get a challenge at school because their fellow students want to know why they have to attend at hospital every month. For fear of asking for permission every month and lie about the reason for permission they end up missing their appointment at CTC which results to a lot of unscheduled visits done by adolescents at CTC.

This finding agrees with [22] who reported that some young people are also fearful of stigma from their partners, families and communities, making them unwilling to come forward for HIV testing in case their families find out that they are sexually active or living with HIV. Furthermore, the health belief model suggests that, there are barriers in health oriented actions which acts like obstacles in undertaking recommended action [22].This fact can make adolescents living with HIV who are in school to fear disclosing their status to school authorities in order to get permission to attend CTC on their appointment dates.

Peer Influence

In this study we found that adolescents living with HIV face social physiological challenges. They have lost hope, have low self esteem, always in conflict with their caregiver and have fear for their future. This led them to neglect going to CTC as scheduled. The finding has also showed that peer influence can help in retaining them on care. This agrees with the health belief model that, beliefs and health motivation are conditioned by social demographic variables and by the psychological characteristics of individuals which are personality and peer group pressure.

This study finding is in the same line with [5], that there should be a systematic assessment of adolescents living with HIV to see those who can become leaders to play this important role of leading others. It is important to select and train adolescent peer educators in care and treatment centers to support and encourage their fellow for retention.

Study Limitations

Adolescents who did not adhere to their CTC appointment dates were hard to find for interviews which prolonged the data collection period. However, these adolescents were reached by the help of peer educators via phone calls and home visits for interview invitation.

Conclusion

In order to improve adolescent's retention on HIV/AIDS CTC services, factors influencing their retention should be considered. It is best to design strategies to address all causes of poor retention by taking into account adolescent living with HIV's perception and actively involve them in their HIV care and treatment services. For those with poor retention the major causes are social structures like family, school and friends around, but negligence also contributes to their poor retention.

Competing Interest

The authors declare no competing interest.

Authors'Contribution

NWN participated in preparing data collection tools, preparing the first draft of the manuscript, IHM reviewed data collection tools, reviewing and editing the manuscript, MJE and EM contributed in reviewing the manuscript.

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References

1. United Nations Children's Fund (UNICEF) (2011) Adolescents in Tanzania. Dar es Salaam. United Republic of Tanzania. DJPA Partnership (Africa) Ltd.

2. United Nations Population Fund (UNFPA) (2013) Motherhood in childhood.

3. UNAIDS (2016) Global AIDS Update. Geneva: UNAIDS.

4. Livingstone JN, Merryweather JB, Mohabir JA, Smith CL, Smith N, et al. (2014) Dramatic Plays as a Tool to Educate Young African American Females About HIV/AIDS. Journal of Health Disparities Research and Practice Volume 7(2).

5. Bekker LG, Myer L, Orrell C, Lawn S, Wood R (2006) Rapid scale-up of a community-based HIV treatment service: programme performance over 3 consecutive years in Gugulethu, South Africa. S Afr Med J 96(4): 315–320.

6. Kibombo R, Neema S, Ahmed FH (2007) Perceptions of risk to HIV infection among Adolescents in Uganda: Are they related to sexual behaviour? Afr J Reprod Health 11(3): 168-181.

7. Aids info (2015) Available.

8. Geng EH, Nash D, Kambugu A, Zhang Y, Braitstein P, et al. (2010) Retention in care among HIV-infected patients in resource-limited settings: emerging insights and new directions. Curr HIV/AIDS Rep 7(4): 234–244.

9. Otieno V, Marima R, Odhiambo J, Penner J., Agot K, et al. (2008) Improving enrollment and retention of youth into HIV services: lessons learned from Kisumu, Kenya. 17th International AIDS Conference; Mexico City August 3–8.

10. The United republic of Tanzania (2013) Ministry of Health and social welfare. National AIDS control programme (NACP) Implementation of HIV/AIDS care and treatment services in Tanzania, Report number 3. Dar es Salaam Tanzania. Ministry of Health and social welfare. National AIDS control programme.

11. Tanzania Health Promotion Support (2015) Program data.

12. Chedi Children Foundation and Orphans Care Pwani (2005) unpublished.

13. Tanzania HIV/AIDS and Malaria Indicator Survey (2008) Tanzania Commission for AIDS (TACAIDS) Dar es Salaam, Tanzania Zanzibar AIDS Commission (ZAC) Zanzibar National Bureau of Statistics Dar es Salaam, Tanzania MEASURE DHS Macro International Inc. Calverton, Maryland USA.

14. Mkuranga district hospital CTC data base January – March (2015) unpublished.

15. Tanzania HIV/AIDS and Malaria indicator survey (2012) Tanzania HIV/AIDS and Malaria indicator survey Report. Tanzania. National Bureau of Statistics (NBS).

16. Horstmann E, Brown J, Islam F, Buck J, Agins BD (2010) Retaining HIV-Infected Patients in Care: Where Are We? Where Do We Go from Here? Clinical Infectious Diseases 50(5): 752–761.

17. World Health Organization (2014) Adolescent HIV Testing, Counseling and Care: Implementation guidance for health providers and planners.

18. Mkwanzi, Ntombizodumo B, et al. (2012) Disclosure of Maternal HIV Status to Children: Considerations for research and practice in Sub-Saharan Africa. Future Virology 7(12): 1159 – 1182.

19. Glanz K, Barbara K, Rimer K, Viswanath K (2008) Health Behaviour and Health Education. Theory Research and Practice. 4th Education.

20. Waringe A. Roura M, Urassa M, Busza J, Athanas V, et al. (2009). Doubts, denial and Devine intervention: understanding delayed attendance and poor retention rates at a HIV treatment programme in rural Tanzania. AIDS Care 21(5): 632-637.

21. UNAIDS (2013) Global Report on Global Epidemic.

22. Champion VL, Skinner CS (2008) The Health Belief Model. Health Behaviour and Health Education; Theory, Research, and Practice. Jossey-Bass, San Francisco, 45-65.