FERTILITY DESIRES AND INTENTIONS OF HIV-POSITIVE INDIVIDUALS ON ANTIRETROVIRAL TREATMENT IN DAR ES SALAAM

By

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A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Public Health of the Muhimbili University of Health and Allied Sciences

October 2008

CERTIFICATION

The undersigned certifies that he has read and hereby recommends for examination a dissertation entitled ***Fertility Desires and Intentions of HIV Positive Individuals on Antiretroviral Treatment in Dar es Salaam,*** Submitted in Partial Fulfillment of the Requirements for the Degree of Master of Public Health of the Muhimbili University of Health and Allied Sciences.

Professor KIWARA, A.D

(Supervisor)

Date: 12th November, 2008

DECLARATION AND COPYRIGHT

I, **Saidi Mpendu,** declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

Signature_____

Date 12th November 2008

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DEDICATION

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ABSTRACT

There is an increase of people living with HIV/AIDS who are on antiretroviral treatment worldwide including Tanzania. Most of them are men and women of reproductive age. The desires and intentions of parenthood to these individuals are often being observed but little is known on the issues that push these individuals to have the desire and intention of parenthood. A descriptive cross section study was conducted in Dar es salaam, aimed at determining factors associated with fertility desires and intentions of HIV positive individuals who are on antiretroviral treatment. A total of 245 men and women participated in the study. Among them 35.3% and 64.7% were men and women respectively. Data were analyzed by using SPSS computer software, frequencies, cross tabulation and binary logistic regression were done to find the associated factors. One hundred and one participants desire to have children in the future with more men compared to women (53.0% versus 44.1%) and 112 individuals who participated in this study have an intention of having children in the future, with more men compared to women (49.4% Vs 46.7%).Fertility desires and intentions were found to be associated with having a child, number of living children and importance of having own child. Disclosure of HIV status to the sexual partner doesn't associate with fertility desires, but irrespective of this many HIV positive individuals desires to have children with HIV negative partners.

Conclusion: Having none or one living child and importance of having own child has association with fertility desires and intentions. In addition to that desires and intentions it has important implication on the transmission of HIV to the sexual partner as well as to the new born. Family planning programme is recommended to help them to make informed choices in fulfilling their desire and intention of parenthood .Also a study should be done to investigate why many HIV positive individuals desire to have children with HIV negative persons.

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LIST OF ABBREVIATIONS/ACRONYMS

AIDS	Acquired- Immuno Deficiency Syndrome
ARV	Antiretroviral
ANC	Antenatal Clinic
CTC	Care and Treatment Centre.
DHAP	Drugs for HIV and AIDS Patients
HIV	Human Immuno deficiency Virus
MTCT	Mother to Child Transmission
NACP	National AIDS Control Programme
PMTCT	Prevention of Mother To Child Transmission
THIS	Tanzania HIV/AIDS Indicator Survey
TDHS	Tanzania Demographic and Health Survey
UNAIDS	Joint United Nations Programme on HIV/AIDS
VCT	Voluntary Counselling and Testing
WHO	World Health Organisation

DEFINITIONS OF TERMS

Desire and Intention

The distinction between desires and intentions is that the agents, desires lead to intentions on their way to become action. In order to understand at what point of this process the agent is, the perceiver use some criteria to distinguish desires and intentions.

1. **The content of the pro- attitude**. Desires can have any content, whereas intentions usually have only action content that means functional content relating to the agent as the subject of these actions. Additionally the intentions are usually related only to the action that the agent believes she can perform.

2. **The role in reasoning of the pro- attitude**. Generally, desires function as input of the reasoning process leading from wish to action, whereas intentions are most often the output of the process.

Intentions are perceived performability, action connectedness and temporal framing while **Desires** are less performable; less connected to actions, and are enacted over long timeframe.

Therefore the desire and intention of having children have important connections between childbearing motivation and reproductive behaviour. In the predominant model of childbearing motivation, the desire for children is affected by personal and cultural traits, while the intention to have children is affected by timing and situational factors. In this study the desires of having children can be affected by the fact that these individuals are HIV positive and the African culture which promote having many children, while intentions can be affected by the fact that they are receiving ARV treatment and their health status is improved.

CHAPTER ONE

1.0 Background

It is about twenty six years now since when the first HIV/AIDS case was diagnosed for the first time in the world. The number of people living with HIV/AIDS has increased rapidly overtime. According to the Joint United Nations Program on HIV/AIDS (UNAIDS 2006) about 39.5 million people are living with the Human Immune-deficiency Virus (HIV) world wide. In the year 2005 alone 4.9million people were newly infected world wide and of these 3.9 million were from Sub Sahara Africa (UNAIDS 2007). The report further observes that the infections are on the increase with 65% of them occurring in sub-Saharan Africa, which is home to 11% of the world's population. The HIV/AIDS burden therefore is heavy in sub Sahara Africa whose population is also facing poverty, hunger and other public health problems. But also currently there is an increase of people living with HIV/AIDS worldwide as a result of decreasing mortality due to Ant retroviral treatment which is widely used in developed and developing countries.

In Tanzania the first three cases were reported in 1983 in Kagera region. From that time the epidemic has spread rapidly in all districts and communities affecting every social and economic sector. The prevalence of HIV/AIDS in Tanzania is 7% (6.3% Men and 7.7% Women THIS 2004). The heterosexual transmission of HIV accounts for almost 80%, of all infections. The most affected individuals are those within the reproductive age group, 15 to 49 years (THIS 2004). Compared to men, women are biologically, socially and economically more vulnerable to the HIV infection (NACP, 2005).

The impact of the HIV epidemic in Tanzania has been profound, and affects all sectors. Today HIV/AIDS is recognized not only as a major public health concern but also as a social economic and development problem (NACP 2005).

The introduction of ARV for AIDS patients in the developed and developing world brought new hope to HIV positive individuals. The main function of ARV is to stop replication of the HIV virus in the human body.

There are three groups of ART widely used in Tanzania and these are Non Nucleoside Reverse Transcriptase Inhibitors (NNRTI), Nucleoside Reverse Transcriptase Inhibitors (NRTI) and Protease Inhibitors (PI) which improve quality and prolong life of HIV/AIDS positive individuals. With Anti retro viral treatment, HIV/AIDS positive individuals now have new hope of life. They are living active life, they go to work, and generally they look better than before ART (DAHP 2003)

The provision of ART in Tanzania goes together with establishing Care and Treatment Centers (CTC) which are accredited by the National AIDS Control Programme (NACP). They serve as outlets for ARV treatment for AIDS patients.

Up to May 2007 Tanzania had already had 164,839 patients enrolled in the ART Programme and out of these 80,628 were treated with Anti retroviral drugs (NACP, 2007) and still the number is increasing day after day.

The wider availability and accessibility of ART to PLHAs suggest that HIV-positive people might now make choices different from those they made earlier, when treatment options were more limited. One of the choices and decision they could make is having children in the future (Chen et al 2001).

The desires and intentions of having children are rather involving because this demands engaging in unprotected heterosexual vaginal sex. Women and men of reproductive age are faced with a major dilemma in such situation because using condoms to reduce the risk of getting infected or re infected with HIV doesn't support their desires and intentions to bear children and become parents.

1.1 Statement of the Problem

In Tanzania the prevalence of HIV is high; many children get infected with HIV through their mothers. NACP estimates that 5.6% of AIDS cases reported in 2005 in Tanzania were among children below 15 years due to MTCT of HIV (NACP, 2005). The fertility rate in Tanzania has remained high 5.7 (DHS2004) despite the high prevalence of HIV/AIDS in the country which is 7% (THIS, 2004).

In the war against HIV/AIDS in the era of ART, fertility issues for HIV positive individuals are becoming increasingly important in Sub Sahara Africa as well as Tanzania when the physical and mental conditions of HIV positive individuals who are on ART is improving .

The fertility desires and intentions of HIV positive individuals to have children in the future has been observed in many studies (Chen et al 2001, Paiva et al 2003, Tamene at el 2007, Nakawiya et al 2007)

HIV-infected individuals having children in the future has significant implications for the transmission of HIV infection to sexual partners and newborns. Maternal transmission accounts for almost all new HIV infections in children. The risk of HIV transmission among individual couples is likely to increase as more infected individuals choose to have children with their HIV-negative and unknown HIV

Furthermore this study will measure the future fertility desires and intentions of HIV individuals who are on ART and not a mere assessment of past pregnancies, births or abortions among pregnant HIV-positive individuals as in many previous studies.

1.3 Research questions

1. What is the association between fertility desire and reproductive history?
2. What is the association between fertility intention and reproductive history?
3. What is the association between fertility desire and disclosure of HIV status to the sexual partner?
4. What is the association between socio demographic characteristics and fertility desires?
5. What is the association between socio demographic characteristics and fertility intentions?

1.5 Objectives

1.5.1 Broad Objective

To determine factors associated with fertility desires and intentions of HIV-positive individuals who are on Anti retroviral treatment in Dar es Salaam.

1.5.2 Specific Objectives.

1. To determine association between reproductive history and fertility desires of HIV positive individual.
2. To determine association between reproductive history and fertility intentions of HIV positive individual

3. To determine the association of disclosure of HIV status to partners among HIV-positive individuals and fertility desires
4. To determine association between social demographic characteristics of HIV positive individuals and fertility desires
5. To determine association between social demographic characteristics of HIV positive individuals and fertility intentions

CHAPTER TWO

2.0 Literature review

The high prevalence of HIV infection in Africa sends mixed feelings and reactions about whether individuals who know their sero-positive status would realize their desires and intentions or they would forego childbearing. Research done else where show that making these new choices is real than imaginary.

A study done in Ethiopia shows that 40.2% HIV positive Individuals (44.7% women and 35.2% men) who were receiving ARVs treatment had a desire to have children (Tamene et al 2007).

In the United State of America research shows overall 28-29% Infected Men and Women receiving medical care in the United State of America desire children in future and 69% of women and 59% of men have intention to have one or more children in the future (James et al 2001).

Furthermore it has been observed that 43% of Brazilian men who are HIV positive and living in San Paulo desire to have children (Paiva et al 2003).Likewise study done in Uganda shows that 18% of HIV positive individuals desire to have more children in future (Nakayiwa et al 2007).What is associated with these desires and intentions of having children is attracting attention of many researchers.

The association of Fertility desires and intentions with reproductive history

Findings from a three country assessment covering Kenya, South Africa and Zimbabwe, reported that respondents were indifferent about the effect of HIV on fertility desires and intentions. While some said that couples who perceived

themselves to be at risk of HIV infection could decide to stop having children because of "precarious future" that may be caused by them contracting the disease. But some also argue that having children helps HIV- infected women to hide their sero status.

Others underscored the importance of children even if one is infected with HIV as they give care to their parents when they become sick. Some further suggested that there was need to "replenish" the population that had been reduced by AIDS related deaths (Ngom et al, 2005).

The factors that are associated with this difference among HIV positive individuals are not well understood because behavioral responses tend to be determined by overlapping factors.

In recent years there is an increase of HIV positive individuals who are on antiretroviral treatment worldwide as well as in sub Saharan Africa, which improves the physical and mental conditions of HIV positive individuals. A study done in Switzerland indicates that there is an association of improving health and greater value for HIV positive individuals weighing reproductive decision as well as desire for parenthood (Panozzo et al 2003).

Another study conducted in Brazil revealed that desire for parenthood is more in the childless men and women (65% verses 36% respectively) compared to those who had 1child 48% verses 19%),2-3 children (34% verses 7%) and more that 4 children (24% verses 3%) (Paiva et al 2007).Likewise in a study done in South Africa shows fertility desires and intentions were associated with not having any children to both men and women who participated in that study, therefore the desire

and intention of having one child was the common cited answer by the participants (Myer et al 2007).

Childbearing after knowing sero status has been associated with null parity, low level of knowledge on vertical transmission of HIV, perceived absence of clinical illness and the wish to avoid stigma and other repercussions of being perceived to be infected or unable to bear offspring. These were findings with respondents from Kenya and Tanzania in a study that involved a comparison of pregnancy status at pre and post HIV diagnosis (Forsyth et al, 2002).

In a study among women living with HIV/AIDS, revealed some of their reasons for having children include not wanting to miss out on motherhood; the wish to leave memory behind; and the social norms that dictate that a woman is only an adult when she gives birth to a child. As such women would rather risk getting HIV infection than becoming childless as this would result to divorce and stigmatization (de Bruyn, 2002).

Another study indicates that the relationship between an HIV diagnosis and subsequent fertility behaviour was found to have little association with childbearing and most women planned to become pregnant despite being infected (Grieser et al, 2001). There are also some factors which could have interfering effects on the desires and intentions of HIV positive individuals to have children in the future. Studies done in Brazil indicate that having many children (at least three children) has been found to have negative association with fertility desires and intentions to women to have another child (Aglaer et al 2007)

The issue of childbearing is complex to people living with HIV and AIDS and their partners because they have to engage into heterosexual vaginal sex while they know their HIV sero status and sometimes the status of the partner. A study done in Brazil shows there is positive association between fertility desires and partner's knowledge about her sero status (Aglaer A et al 2007).

The association of fertility desires and disclosure of HIV status to the partner

Disclosure of HIV status by women who are positive is crucial as far as realization of fertility desires and intentions is concerned; using in-depth interviews in Cape Town found that the married women who had disclosed their status to spouses and family members were discouraged from having children. Fear of vertical transmission and concern for the health of the women were the explanations given. On the other hand, women who had not disclosed their sero-status due to fear of stigmatization expressed pressure to reproduce from family and spouses (Cooper et al, 2005).Furthermore, women may lack choice in negotiating fertility choices and safer sex regardless of their response to HIV infection and those who are infected may not disclose their status to their partners (Seltel, 1995; Ruternberg et al, 2000).

CHAPTER THREE

3.0 Methodology

3.1 Study area

This study was conducted in the three municipalities of Dar es Salaam region. Dar es Salaam was purposely chosen because of its high prevalence rate of HIV/AIDS (THIS 2004) and high number of HIV positive individuals who are on ART.

Dar es Salaam region is located between latitudes 6.36 degrees and 7.0 degrees to the south of Equator and longitudes 39.0 and 33.33 to the east of Greenwich. It is bounded by the Indian Ocean on the east and by the Coast Region on the northern, western and southern part.

The total surface area of Dar es Salaam region is 1,393 square kilometers and is divided in three Municipalities which are Temeke, Kinondoni and Ilala. Temeke Municipality has the largest surface area followed by Kinondoni while Ilala has the smallest area.

A small part of the population in Dar es salaam is employed in the public sector, where others are employed in the private sector, which includes industries, and other formal business.

Currently the population is estimated at 2.5 million and is growing at a rate of 4.3% (Dar es Salaam Profile 2007). The relatively high population growth rate is due to increased birth rates, immigration rates, and more significantly by a transient population.

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Fertility rate in Dar es Salaam region is on the decline as revealed by the falling Crude Birth Rates (CBR) and Total Fertility Rates (TFR) reflecting the rising age at first marriage and greater awareness of family planning. The current Crude Birth Rate of 4.0 and Fertility rate is 5.5 (DHS 2004).

Health service delivery is owned by Public and private sector, where by the services are based on prevention, health promotion and curative care. The line of operation of health facilities start from dispensary, health centre, hospital and national hospital. The total number of health facilities which include dispensaries, health centre and hospitals are 520. The government owns 75 health facilities and the rest are owned by Faith based and Private organizations.

Dar es Salaam has three Municipal hospitals namely Mwananyamala which is in Kinondoni Municipality, Amana in Ilala Municipality and Temeke which is in Temeke Municipality. These hospitals among other activities have PMTCT programme, Care and Treatment Centers (CTC) for HIV/AIDS positive individuals, Ante Natal clinics and reproductive and Child health (RCH) services.

There are 107 VCT centers which provide VCT services to people who need VCT services and ANGAZA project which is owned by AMREF is providing mobile VCT services to the community.

3.2 Study design

Descriptive Cross Sectional quantitative research method was used to address the research problem. The study was conducted from June to August 2008

3.3 Study population

The study population was HIV positive Men and Women aged 15-49 who are attending care and treatment centers in Dar es Salaam region.

3.3.1 Sample size determination

The sample size was determined using the single proportion formula.

$$n = \frac{(z)^2 P(100-P)}{\varepsilon^2}$$

Where:

n= Minimum sample size desired.

z= The percentage of standard normal distribution corresponding to 95% confidence interval which is 1.96 (approximately)

P= The proportion of HIV positive individuals on ART who desire and intent to have children 45 %.(From previous studies)

ε = The margin of error of P, set at 6%

Substituting for the above formula, the minimum sample size was 264. However, 10% was added to take care of any shortfalls, therefore a minimum sample size was 290 HIV positive individuals.

3.3.2 Inclusion criteria

HIV positive individual attending CTC clinic, on ARV, Age 15-49, living in Dar Es Salaam, consenting individual

3.3.3 Exclusion criteria

Pregnant woman, Individuals above 49 years or below 15years, non consenting individual and not on ARV.

3.4 Sampling method

The multi stage sampling was done to select a total six care and treatment centers (CTC). The first stage purposely selects two CTCs with large number from each Municipality. From Kinondini Municipality, the two CTC were Mwananyamala and Sinza. From Ilala the CTC selected were Amana and Buguruni care and treatment centre. In Temeke Municipality, Temeke and Mbagala CTC were selected. The second stage was to select study participants which were conducted by simple random sampling. On each working day in each selected site six eligible participants were randomly selected from the register to participate in this study. The participants were asked consent to participate in the study and those who gave consent were enrolled in this study.

3.5 Data collection

Data was collected from participants by using an interviewer administered structured questionnaire. The questionnaire had both closed and open-ended questions. The questions were formulated in English and then translated to Kiswahili language, which is the widely spoken language in Tanzania. Data was collected in weekdays

from Monday to Friday because Care and Treatment Centers (CTC) are working in those days. The research team made visits and conducted interviews with all eligible participants.

3.6 Variables

The dependent variables included the fertility desires and intentions. The Independent variables were age, sex, marital status, and education, and occupation, disclosure of HIV status to the partner, religion, and reproductive history.

3.8 Pre-testing of data collection tool.

Before the data was collected the questionnaire was pre-tested in Kibaha district and the necessary amendments were made according to the recommendations obtained from the pre-testing.

3.7 Training of research assistants

Six research assistants (RAs) were trained for two days on data collection in order to make them familiar with the research tool. After finishing the training, the research assistants were posted to CTC for collection. Data collection was done from six CTC therefore every CTC got one research assistant. The principal investigator was responsible for training of the research assistants and supervision of data collection.

3.9 Data management

Every day after data collection, all filled in questionnaires were checked for consistency and accuracy so as to make corrections where necessary and proper filling was ensured

3.10 Data processing and analysis

Data from individual questionnaires were coded, entered and analyzed using SPSS computer software. Statistical analysis was done using the same software. Where appropriate, the Chi square and Regression (binary logistic) were used to test the association between the dependent and independent variables.

3.11 Ethical consideration

The ethical clearance was obtained from the Institution Review Board (IRB) of Muhimbili University of Health and Allied Sciences (MUHAS). Thereafter the permission to conduct the study was obtained from authorities of Kinondoni, Ilala and Temeke municipalities. The verbal informed consent was obtained from every study participant after explaining him/her the aim of the study. To ensure privacy during the interview and confidentiality, respondents were asked to go to the room where they were comfortable to talk to research assistant and the questionnaires were given numbers instead of their names. They were also assured confidentiality and that the information obtained would only be used for research purposes and that by any means would not be disclosed to other people.

CHAPTER FOUR

4.0 RESULTS

4.1 Socio-demographic characteristics of the study sample

A total of 235 HIV positive individuals who were on ART treatment from six Care and Treatment Centers (CTC), two from each Municipality (Kinondoni, Temeke and Ilala) of Dar es Salaam region were randomly selected to participate in the study. The study participants agreed to participate by responding to the administered questionnaire resulting to the response rate of 95%. The socio- demographic characteristics of participants are summarized in Table 2. The minimum age of the respondents was 15 years while the maximum age was 45 years and the mean age was 33.6 years. The median and mode was 33.0 and 30.0 respectively.

Table 1: Distribution of study participants per Municipality (n=3)

Name of Municipality	Frequency	Percent
Ilala	75	31.9
Kinondoni	82	34.9
Temeke	78	33.2
Total	235	100.0

The 15-24 years age group was 19 (8.1%) while 25-34 years age group was 109 (46.4%). The 35-45 years age group was 107 (45.5%). females were 152 (64.7%) whereas males were 83 (35.3%). Among these participants, single were 55 (23.4%), married were 105 (44.7%), cohabiting were 36 (15.3%). The others were divorced, separated and widowed.

Data indicate that 6.8% had no formal education, 64.7% had primary school education, and 23.8% had completed secondary school education, while 4.7% have achieved college education. On religious affiliation data showed that Christians were 46.4% while Muslim were 53.6%. With regard to occupation 46.4% were self employed, 21.3% were house wives, 4.3% were students and only 17% were employed.

Table 2: Socio-demographic characteristics of study participants

Characteristic	Number	Percentage (%)
Age (years)		
15-24	19	8.1
25-34	109	46.4
35-45	107	45.5
Gender		
Female	152	64.7
Male	83	35.3
Marital status		
Single	55	23.4
Married	105	44.7
Cohabiting	36	15.3
Divorced	14	6.0
Separated	6	2.6
Widowed	19	8.1
Religion		
Christian	109	46.4
Muslim	126	53.6
Education level		
No formal education	16	6.8
Primary education-complete	152	64.7
Secondary education	56	23.8
College education	11	4.7
Occupation		
Student	10	4.3
Self employed	109	46.4
Employed	40	17.0
Rely on parents	11	4.7
Rely on my partner	15	6.4
House wife	50	21.3

4.2 Proportion of who have had any children.

Out of 235 HIV positive individuals who participated in this study 185 (78.7%) had children. But the number of living children per participant ranged from none to more than four. Out of them 71 (38.4%) had one living while 6 (3.2%) had none. When study participants asked on the importance of having their own child, most respondents 207 (88.1%), said it is very important while 28 (11.9%) said it is not important at all for them to have their own children.

4.3 Desires and Intentions of have children in the future.

About 111 (47.2%) of HIV infected individuals who participated in this study said that they wish to have children, while 124 (52.8%) did not wish to have children. With regard to fertility intention to have children in the future, 112(47.6%) intended to have children while 123(52.3%) do not intended to have children in the future. When they were asked how many children they were intend to have, 48 (42.9%) reported they intended to have one child while 43(38.4%) intend to have two children in the future.

Table 3: Distribution of HIV+ individuals according to various characteristics

Response	Number	Percentage (%)
Having had any child (N=235)		
No Children	50	21.3
Have had Children	185	78.7
No. of living children (N=185)		
None	6	3.2
One	71	38.4
Two	38	20.5
Three	36	19.5
Four	20	10.8
More than four	14	7.6
Importance of having own children (N=235)		
Very important	155	66.0
Not important	80	34.0
Desire to have child in the future (N=235)		
Desires	111	47.2
Do not Desires	124	52.8
Intention to have child in the future (N=235)		
Intend	112	47.6
Not intend	123	52.3
No. of children intended (N=112)		
One	48	42.9
Two	43	38.4
Three	16	14.3
More than three	5	4.4
Disclosure of HIV status to the sexual partner (N=221)		
Disclosed	143	64.7
Not disclosed	78	35.3

4.4 Disclosure of HIV status to the sexual partner.

On disclosure of HIV status to the partner, 78(35.3%) did not disclose their HIV status to their sexual partners. When asked if they would wish to have children in the future with a HIV positive partner, 159(69.4%) reported they do not wish to have children with a HIV positive partner

4.4.1 Reasons for disclosure or not disclosing of HIV status to the sexual partner

Main reasons for disclosure of HIV status to the partner was as follows, 143(60.9%) said that they have disclosed their HIV positive status because they would like to plan their future life together with their partners. On the other hand, 78(33.2%) who did not disclose their HIV status, they did so because they feared separation for those who have sexual partner and divorce for married couples.

4.4.2 Reasons for desire of having children in the future.

All 235 HIV positive individuals were asked to give reasons for their answer on the question of whether they desire to have children in the future. Some of the study participants gave reasons for their desire and some gave reasons for not desiring to have children in the future (as shown in figure 1).

The most positive reasons cited by (68) 28.9% of HIV positive individuals for their desire of having children in the future are "I want to have my own child who will take care of me", achieve social fulfillment and also cement couple relationship. This was followed by 49 (20.9%) who said "I have only one child or don't have any child at all".

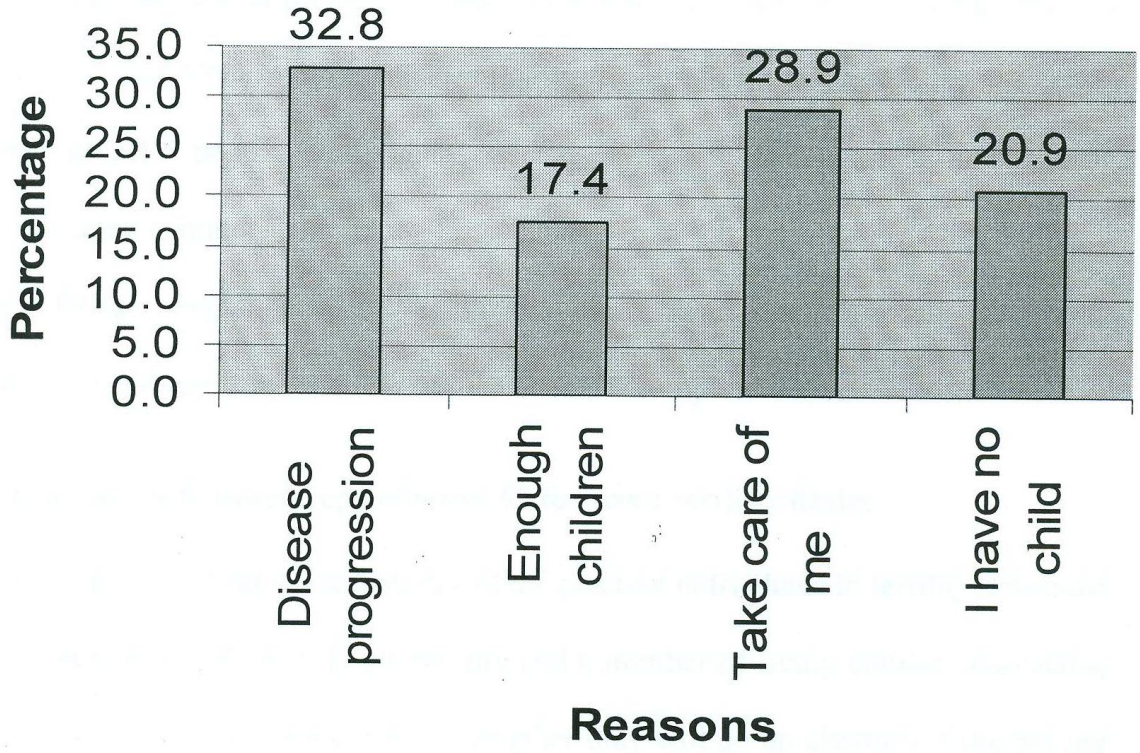


Figure 1: Positive and negative reasons for desire of having children in the future (n= 235)

Likewise, the other HIV positive individuals who said that they don't desire to have children in the future were asked to give their reasons. The most common reason cited by 77 (32.8%) of respondents is "I am HIV positive therefore I fear disease progression as well as infecting new born child through mother to child transmission". The rest said that "I am satisfied with the children I have", the other reasons were having not married, having bilateral tube ligation (for the women) and vasectomy (for men).

4.5 Willingness of doing an abortion if her/his partner becomes pregnant.

The high proportion of the respondents 174 (74%) said they had sex in the previous six months and 175 (74.5%) indicates that they will not do an abortion if she or his partner of HIV positive individual becomes pregnant. When asked to say their reasons, approximately one third of respondents said "it is a sin and is like killing a human being", others 92 (40.7%) said they will not do an abortion because they want to have children and also the fear of post abortion complications.

4.6 Association between reproductive history and fertility desire

In assessing the reproductive history of HIV positive individuals in fertility desire the respondents were asked if they have any child, number of living children they have, ,importance of having own child and whether they will do an abortion if she/partner got pregnant. The response categories were classified as desire; don't desire to have children in the future.

4.6.1 Association of ever having a child and fertility desire

A total of 38 (76.0%) of respondents who do not have any child have desire of having children in the future compared to 73(39.5%) of the respondents who have any child to have desire of having children in the future. Therefore lager proportion of the respondents who do not have children have a higher desire to have children as compared those who have had children in the past (P-value = 0.001)

4.6.2 Association of the number of living children and desire of for having children in the future

The results revealed that high proportional of respondents 42 (59.2%) who had one living child have desire of having children in the future compared to 1 (7.1%) of those who have more than four living children. Therefore majority of the respondents who had one living child have desire to have children as compared to those who have more than four living children,

(P-value =0.001)

Table 4: Fertility Desires and associated factors of HIV positive individuals

	Fertility desire		
Factors	**Desire**	**Don't Desire**	**P-value**
Having any children	**n %**	**n %**	
No children	38 (76.0)	12 (24.0)	
Have had children	73 (39.5)	112 (60.5)	0.001
No. of living children			
None	3 (50.0)	3 (50.0)	
One	42 (59.2)	29 (40.8)	
Two	14 (36.8)	24 (63.2)	
Three	8 (22.2)	28 (77.8)	
Four	5 (25.0)	15 (75.0)	
More than four	41 (7.1)	13 (92.9)	0.001
Importance of having own children			
Very important	107 (51.7)	100 (48.3)	
Not important	4 (14.3)	24 (85.7)	0.001

4.6.3 Association of importance of having own child and fertility desire of having children in the future

The association of importance of having own child and fertility desire shows that majority 107 (51.7%) of respondents who saw that it was very important to have their own child, they desire to have children in the future. On the other hand those who are reported to say having own child is not important 4 (14.3 %) do not desire to have children in the future. (P-value<0.001) (See Table 3)

4.7 Association between reproductive history and fertility intention

In assessing the reproductive history of HIV positive individuals and fertility intention, the respondents were asked if they have had any child, number of living children they have and importance of having own child . The responses were classified as intend, don't intend to have children in the future.

4.7.1 Association between having any child and fertility intention

The study participants were asked if they have had any child in their life. High proportion 78.0% (39) of respondents who didn't have any child showed they have intention of having children in the future compared to 39.5% (73) of respondents who have had child intent to have children in the future. This finding is statistically significant, P-value < 0.001

Table 5: Fertility Intentions and associated factors of HIV positive individuals

Factors	Fertility Intention: Have Intention	Fertility Intention: Don't have Intention	P-value
Having any children	**n %**	**n %**	
No children	39 (78.0)	11 (22.0)	
Have had children	73 (39.5)	112 (60.5)	0.001
No. of living children			
None	3 (50.0)	3 (50.0)	
One	42 (59.2)	29 (40.8)	
Two	14 (36.8)	24 (63.2)	
Three	8 (22.2)	28 (77.8)	
Four	5 (25.0)	15 (75.0)	
More than four	1 (7.1)	13 (92.9)	0.001
Importance of having own children			
Very important	108 (52.2)	99 (47.8)	
Not important	4 (14.3)	24 (85.7)	0.001

4.7.2Association of living children and fertility intention of having children in the future

Findings indicates that 42 (59.2%) of HIV positive individuals who had one living child and 3 (50.0%) of who had no living child have intention of having children in

the future. Where is "on the other hand" those who had more than four living children 1 (7.1%) have an intention of having children in the future.

(p = 0.001) (See Table 5)

4.7.3 Association of importance of having own child and fertility intention to have children in the future.

The association between importance of having own child and fertility intention of HIV positive individuals indicates that majority 108 (52.2%) of respondents who said that it is very important to have own child, they intent to have children in the future compared to 4 (14.3%) who reported that, having own child is not important (p=0.001).

4.9 Association of Disclosure of HIV status to the partner and fertility desire to have children in the future.

The association between disclosure of HIV status of HIV positive individual to the partner and fertility desire of HIV positive individual to have children in the future showed that 52.6% (41) of respondents who have not disclosed their HIV status to the partner have desire to have children in the future compared to 44.8%(64) who disclosed their HIV status to the partner have desire to have children in the future. The finding is not statistically significant (p= 0.267).

4.10 Association between fertility desires and socio-demographic characteristics

This study revealed that male HIV positive individuals; aged between 15-24 years, single, who belong to Christian denomination, who had college education as well as those who rely on their parents were more likely to have fertility desires of having

children in the future compared to their colleagues in the other socio-demographic categories as shown in the Table 5 below.

The findings also suggest that there is an increase of fertility desires to HIV positive individuals with the decrease of age among respondents; also there is increase of fertility desires to those respondents who were students and to those who rely on their parents. However, age showed statistically significant on fertility desire ($p=0.001$)

Table 6: Association between fertility desires and socio-demographic characteristics (n=235)

	Fertility desire		
Characteristics	**Desire**	**Don't Desire**	**P-value**
Gender	**n %**	**n %**	
Female	67 (44.1)	85 (55.9)	
Male	44 (53.0)	39 (47.0)	0.219
Age (years)			
15-24	12 (63.2)	7 (36.8)	
25-34	59 (54.1)	50 (41.8)	
35-45	40 (37.4)	67 (62.6)	0.017
Marital status			
Single	29 (52.7)	26 (47.2)	
Married	54 (51.4)	51 (48.6)	
Cohabiting	16 (44.4)	20 (55.6)	
Divorced	4 (28.6)	10 (71.4)	
Separated	1 (16.7)	5 (83.3)	0.256
Widowed	7 (36.8)	12 (63.2)	
Religion			
Christian	52 (47.7)	57 (52.3)	
Muslim	59 (46.8)	67 (53.2)	0.893
Education			
Formal education	8 (50.0)	9 (50.1)	
Primary education	67 (44.1)	90 (55.9)	
Education	28 (50.0)	31 (50.0)	
College education	8 (72.7)	4 (27.3)	0.417
Occupation			
Student	7 (70.0)	3 (30.0)	
Self employed	49 (45.0)	60 (55.0)	
Employed	19 (47.5)	23 (52.5)	
Rely on parents	8 (72.7)	3 (27.3)	
Rely on partner	6 (40.0)	10 (60.0)	
housewife	22 (44.0)	28 (56.0)	0.336

Table 7: Association between fertility intention and socio-demographic characteristics (n=235)

	Fertility desire		
Characteristics	**Desire**	**Don't Desire**	**P-value**
Gender	**n %**	**n %**	
Female	71 (46.7)	81 (53.3)	
Male	41 (49.4)	42 (50.6)	0.785
Age (years)			
15-24	15 (78.9)	4 (21.1)	
25-34	57 (52.3)	52 (47.7)	
35-45	40 (37.4)	67 (62.6)	0.001
Marital status			
Single	32 (58.2)	23 (41.8)	
Married	51 (48.6)	54 (51.4)	
Cohabiting	17 (47.2)	19 (52.8)	
Divorced	4 (28.6)	10 (71.40	
Separated	1 (16.7)	5 (83.3)	
Widowed	7 (36.8)	12 (63.2)	0.172
Religion			
Christian	52 (47.7)	57 (52.3)	
Muslim	60 (47.6)	66 (52.4)	0.989
Education			
Formal education	9 (56.3)	7 (43.7)	
Primary education	67 (44.1)	85 (55.90	
Education	28 (50.0)	28 (50.0)	
College education	8 (72.7)	3 (27.3)	0.989
Occupation			
Student	9 (90.0)	1 (10.0)	
Self employed	48 (44.00	61 (56.0)	
Employed	18 (45.0)	22 (55.0)	
Rely on parents	8 (72.8)	3 (27.2)	
Rely on partner	7 (46.6)	8 (53.4)	
housewife	22 (44.0)	28 (56.0)	0.053

Findings indicates that male HIV positive individuals who were aged between 15-24 years, single, who are belong to Christian denomination and who had college education as well as those who were students were more likely to have intention of having children in the future compared to their colleagues in the other socio-demographic categories as shown in the Table 8.

The findings also show that there is an increase of fertility intention to HIV positive individuals with the decrease in age and those who were students. However, the association of age and fertility intention shows to be statistically significant (p= 0.001) (see Table 8 below)

Table 8: Odd ratio for fertility desires of HIV positive individuals to have children in the future in Dar es Salaam.

Characteristic	Number	OR	95%CI		P-value
Age group (yrs)					
35-49	7	1.00			0.826
15-24	85	1.201	(0.202	- 7.135)	0.841
25-34	101	0.833	(0.420	- 1.651)	0.600
Have any child					
No	8	1.00			
Yes	185		0.000		0.999
Number of Living children					
More than four	12	1.00			
None	71	0.397	(0.055	- 2.860)	0.359
One	40	0.294	(0.090	- 0.959)	0.042
Two	36	0.770	(0.218	- 2.716)	0.685
Three	14	1.440	(0.385	- 5.387)	0.588
Four	20	4.515	(0.451	-45.249)	0.200
Importance of own child					
Not important	25	1.00			
Very important	168	0.200	(0.054	- 0.742)	0.016

The respondents who have one child were approximately 0.3 likely to have fertility desire than those who have more than four children (OR= 0.29; 95% CI: 0.090-0.959; p= 0.042). Likewise for those who said that to have own child/children is very important were 0.2 likely to desire to have children in the future than those who said is not important (OR = 0.20; 95% CI: 0.054- 0.742; p = 0.016).

Table 9: Odd ratio for fertility intention of HIV+ individuals to have children in the future.

Characteristic	Number	OR	95%CI		P-value
Age					
35-45	7	1.00			0.794
15-24	85	0.542	(0.081	-3.635)	0.528
25-34	101	0.875	(0.442	-1.733)	0.702
Have any child					
No	8	1.00			
Yes	185		(0.000	-1.000)	0.999
Number of living children					
More than four	12	1.00			0.007
None	71	0.390	(0.054	-2.817)	0.350
One	40	0.310	(0.095	-1.012)	0.052
Two	36	0.763	(0.216	-2.691)	0.674
Three	14	1.440	(0.385	-5.387)	0.588
Four	20	4.556	(0.454	-45.680)	0.197
Importance of own child					
Not important	25	1.00			
Very important	168	0.195	(0.052	-0.728)	0.015

This study showed that the respondents who said that "to have your own child/children is very important" were 0.3 more likely to intend to have children in the future than those who said it is not important (OR 0.20; 95% CI: 0.052-0.728; p = 0.015)

CHAPTER FIVE

5.0 Discussion

Tanzania is one of the countries in Africa with a high prevalence rate of HIV, but also has a high fertility rate. For that matter, fertility issues for HIV-positive individuals are becoming increasingly important. Advances in HIV treatment with antiretroviral drugs to HIV positive individuals and PMTCT programme have improved the health status and survival of these individuals as well as decreased transmission from infected mothers to their children. Therefore these individuals are more frequently now considering childbearing and parenthood than ever before. This study sought to determine factors that are associated with fertility desires and intention of HIV positive individuals on ART to have children.

5.1 Reproductive history and fertility desire

To the best of my knowledge this study is first study to examine factors associated with fertility desires and intentions of HIV positive individuals who are on ART in Tanzanian population. The findings of this study revealed that approximately half of the individuals who participated in this study wish to have children in the future. The reasons which support their desire were they want to have their own child who will take care of them, achieve social fulfillment and also cement couple relationship. Others cited that they do not have a child or they have only one child. For those who do not desire to have children in the future they had their own reasons for why they don't desire to have children and the most cited reasons were, fear disease progression and infecting new born baby. This shows that the knowledge of HIV transmission among HIV positive individuals is high.

Further more, this study indicate that there is a strong relationship between fertility desires of HIV positive individuals who are on ART to have children in the future and having no child, having one living child and importance of having own child. Such results support the assertion that having no children or fewer children may be a factor that determines whether HIV positive individual would desire to have or not to have children in the future.

This however contradicts findings from the study done in Switzerland on High risk behaviour and fertility desires among heterosexual HIV positive patients with sero discordant partners. It documented that the desire for parenthood was associated with improving health of HIV positive individual (Panozzo et al 2003)

Furthermore, the findings from this study conform with the observation from a study done in Sao Paulo ,Brazil on Gender and Reproductive Rights of Men and Women Living with HIV which shows that fertility desires of parenthood is more to childless men and women compared to those who have one and more. However, for some people , the desire for childbearing might be attributed to the paramount importance placed on fertility, especially after marriage as documented else were by Preston-white (1999).

It should be emphasized that in most instances, HIV infected individuals were more stigmatized by the surrounding communities before ART than now where ARV treatment is available and most of individuals want to have children because they want to be sure who will take care of them when they became sick or when they are old. Some of respondents want to cement their couple relationship, where having children in the marriage life is very important in some communities. It is not

therefore surprising that individuals like this have a high proportion of respondents who would desire to have children.

5.2 Reproductive history and fertility intention

This study indicates that the respondents expected to have children in the future are almost the same as the number of respondents who desire to have a children, and this is may be due to the fact that the desire function process leads from wish to action (intention).That means for these individual the childbearing motivation is affected by reproductive behaviour. Findings shows that there is association between fertility intentions and not having a child, approximately three quarters of respondents who intend to have a child have no child at all. Also indicates that there is an association between fertility intention and number of living children. Three quarters of all respondents who have none living child were intending to have children in the future compared to below a quarter of respondents who have more than four living children.

Likewise the study observed the association between fertility intention and importance of having own child. A half of respondents who said it is very important to have own child intend to have children in the future. This is inconsistent with the study done in South Africa when they assessed fertility intention by looking in the pregnancy intention and they found that the fertility intentions were increasing with duration on ART treatment (Myer et al 2007). Likewise, this study is consistent with the findings from the study done in Kenya and Tanzania which indicated that the fertility intention was associated with low level of knowledge on vertical transmission of HIV, perceived absence of clinical illness and the wish to avoid

stigma and other repercussions of being perceived to be infected or unable to bear offspring (Forsyth et al, 2002).

The findings from this study may be due to social culture characteristics where people like to have their own children for the social fulfillment and being respected in the society, but at the same time they want to reassure them selves about who will take care of them especially when they will become old or in case of health or any social problem. However, caution should be exercised in making direct comparisons with previous studies as there were considerable differences in the study design and settings although they may be useful in identifying the trends in fertility desires and intentions.

5.3 Disclosure of HIV status to the partner and fertility desire.

This study finds no association between disclosure of HIV status to the sexual partner and fertility desire of HIV positive individuals on antiretroviral treatment to have children in the future. Half of respondents desire to have children without disclosed their HIV status to the sexual partner. This could cause the spread HIV virus to the partners while their fulfilling their desire of parenthood.

Finding from this study contradicts findings by Cooper et al, (2005) who documented that the disclosure of HIV status is crucial as far as realization of fertility desires and intentions is concerned and found that the married women who had disclosed their HIV status to spouses and family members were discouraged from having children. The contradiction between these studies could be explained by the nature of participants. In this study was conducted in the era of antiretroviral

treatment which improves their physical and mental health as well as survival; being HIV positive is longer a death sentence, PMTCT programmes are every where and accessible, also there is less stigma among community members compared to some years ago when ARV drugs were not available and not accessible.

On the other hand this study revealed that majority of HIV positive individuals do not wish to have children with HIV positive partner. That means high proportion of HIV positive individuals want to have children with HIV negative partner. This suggest that respondents know about re infection of HIV infection, but also they do not want to leave behind an orphan if he/she will have a child with HIV positive partner and all die due to AIDS. Some of them thought that having HIV negative partner will reduce chance of newborn contracting HIV.

5.4 Social demographic and fertility desire

The study finding indicate that male HIV positive individuals; HIV positive individuals who aged between 15-24 years, single, who belong to Christian denomination, who had college education as well as those who rely on their parents were more likely to have fertility desires of having children in the future compared to their colleagues in the other socio-demographic categories. This might be attributed to fact that the HIV positive individuals at this age are most probably in early marriage, or there are still single and their childbearing motivation is very high.

5.5 Social demographic and fertility intention

Findings indicates that male; HIV positive individuals who were aged between 15-24 years, single, who belongs to Christian denomination, who had college education as well as those who were students were more likely to have fertility intention of having

children in the future compared to their colleagues. But age was strongly and significantly associated with fertility intention. This may be attributed to the fact that there are young and infected in HIV therefore they want to leave memory behind before they die.

5.6 Study limitation

This study has limitation from the setting where it was conducted. It could force the participants not to be free and limit their answers to the administered questionnaires. In addition to that, those who participated in this study were only those who were attending the Care and Treatment Center (CTC); leaving behind those in the community. This could affect the results and generalization of the findings.

CHAPTER SIX

6.0 Conclusion

The fact that many HIV positive individuals who have none or one living child and who perceived that having own child is very important have fertility desires and intentions and this have important implication to the transmission of HIV infection to the partners as well as to the new born. This highlights the importance of incorporating fertility-related counseling, as well as contraception and advice regarding safe conception and childbirth, as appropriate, into HIV treatment services. Health professionals who work with these individuals need to provide the accurate, non judgmental reproductive health information.

Furthermore this study indicates that young age is also having association with fertility desires and intentions, at the same time majority of them want to have children with HIV negative partner. For that matter, therefore there is need of family planning counseling and condom promotion to these individuals so that they can make informed choices and not spread HIV infection to their HIV negative partners. There is no difference between desires and intentions to these individuals because their desires entail with intentions and this is may be due to the ARV treatment which makes their desires put in to action.

6.2 Recommendations

The recommendations out of this study are to have family planning programmes in place which will help them to make informed decision in fulfilling their desires and intentions of having children and social services which will take care of HIV positive individuals and reduce the possibility of these individuals to transmit HIV infection while they are fulfilling the desire and intention of having their own children.

It is also recommended that more studies are needed to investigate why these individuals want to have children with HIV negative partner and hence reduce the spread of HIV infection.

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8.0 APPENDICES

Appendix I

Questionnaire (English version)

Questionnaire Number _____

Name of District _____

Name of (CTC) _____

Name of Interviewer_____

Date _____

Starting Time _____

PART I

Social demographic characteristics

1. Gender : Male (_____) Female (_____)
2. How old are you _____
3. What do you do on day today basis to earn a living?
    1) Student
    2) Self employed
    3) Employed
    4) Rely on parents
    5) Rely on my partner
    6) House wife
    7) Others (Specify) [ ]

What is your religion?

1) Christian

2) Muslim

3) Traditional religion

4) Others (Specify) [ ]

5. What is your level of education?

1) No formal education

2) Primary education complete

3) Secondary education

4) College education [ ]

6. What is your current marital status?

1) Single

2) Married

3) Cohabiting

4) Divorced

5) Separated

6) Widowed [ ]

PART II

Reproductive history

7. Did you have sexual intercourse in the past six month?

1) Yes

2) No [ ]

8. Will you do an abortion if you/ your partner become pregnant?

1) Yes

2) No [ ]

9. Give your reasons for the above answer_____

_____

10. Do you have any child?

1) Yes

2) No [ ]

11. How many surviving children do you have?

1) None

2) One

3) Two

4) Three

5) Four

6) More than four [ ]

12. How important is it for you to have your own child?

1) Very important

2) No important [ ]

If women skip question no. 16

13. Did you do vasectomy?

1) Yes

2) No [ ]

If man skip question no. 17

14. Did you do bilateral tube ligation (BTL)

1) Yes

2) No [ ]

15. Would you desire to have child / children in the future?

1) Yes

2) No [ ]

16. What are some reasons for your above answer?

1) _____

2) _____

3) _____

17. Does your partner also desire to have child/ children in the future?

1) Yes

2) No [ ]

18. Is religion has importance for you to desire children in the future?

1) Yes

2) No [ ]

19. Give a reason for your answer in no. 21

1) _____

2) _____

20. "I intend to give birth to children in the future.''

1) Yes – **go to question 24**

2) No - **go to question 25** [ ]

21. How many children do you expect in the future?

1) One

2) Two

3) Three

4) More than three [ ]

22. Is religion importance for you to intend children in the future?

1) Yes

2) No [ ]

23. Give reasons for your above answer

1) _____

2) _____

PART III

Disclosure of HIV status to the partner

24. Do you know the HIV status of your sexual partner?

1) Yes - **go to question 29**

2) No - **go to question 28** [ ]

25. Give reason /s for your above answer

1) _____

2) _____

26. Did you disclose to your sexual partner your HIV status?

1) Yes

2) No [ ]

27. What were your reasons for disclosing or not disclosing?

1) _____

2) _____

28. If you know that your partner is HIV positive would you wish to have children

with him/her?

1) No

2) Yes [ ]

29. If your partner knows that you are HIV positive person, do you think that he/ she wish to have children with you?

1) Yes

2) No [ ]

30. Can mother who is HIV positive bear a child who does not have the HIV virus?

1) Yes

2) No

3) I don't know [ ]

Appendix II

Questionnaire (Swahili version)

NAMBA YA DODOSO_____

WILAYA_____

JINA LA KITUO CHA MATIBABU (CTC)_____

JINA LA MSAILI_____

TAREHE_____

MUDA WA KUANZA_____

SEHEMU YA KWANZA

Taarifa Binafsi

1. Jinsia: Mume (____) Mke (___)
2. Umri_____
3. Ni shughuli gani ufanyazo kila siku za kukupatia kipato?

   1)Mwanafunzi

   2)Nimejiajiri

   3) Nimeajiriwa

   4)Nategemea wazazi wangu

   5) Namtegemea mwanza wangu

   6) Mama wa nyumbani [ ]

   7) Njia nyenginezo (Taja)_____

4. Wewe ni muumini wa dini gani?

   1) Mkristo

1) Muislamu

2) Dini ya asili [ ]

3) Nyingine (Taja) _____

5. Je una kiwango gani cha elimu?

1) Sijasoma

2) Elimu ya Msingi

3) Elimu ya sekondari

4) Elimu ya chuo [ ]

6. Nini hali yako ya ndoa?

1)Sijaolewa

2)Nimeolewa

3) Naishi na bwana/ mwanamke

4) Tumeachana

5) Tumetengana

6) Mjane [

SEHEMU YA PILI

Historia ya Uzazi

7. Je umewahi kufanya tendo la kujamiiana katika kipindi cha miezi sita iliyopita

1) Ndiyo

2) Hapana [ ]

8. Je, wewe/ mwenzi wako akipata mimba utaitoa?

1)Ndio

2) Hapana [ ]

9. Toa sababu ya jibu lako namba 8

   1) _____

   2) _____

10. Je, umeshawahi kupata mtoto?

   1) Ndio- **nenda swali la 11**

   2) Hapana – **nenda swali la 12** [ ]

11. Je, una watoto wangapi ambao wako hai?

   1) Hakuna

   2) Mmoja

   3) Wawili

   4) Watatu

   5) Wanne

   6) Zaidi ya wanne [ ]

12. Je, ni muhimu kiasi gani kwako wewe kupata mtoto/ watoto wako binafsi ?

   1) Muhimu sana

   2) Sio muhimu [ ]

Kama ni mwanamke nenda swali la 14

13. Mirija yako ya uzazi wa kiume imekatwa? (vasectomy)

   1) Ndiyo

   2)Hapana [ ]

Kama ni mwanaume acha swali la 14

14. Mirija yako ya uzazi ya kike imekatwa?(bilateral tube ligation)

   1)Ndiyo

2) Hapana [ ]

15. Je, unatamani kuwa na mtoto / watoto baadaye?

1) Ndiyo

2) Hapana [ ]

16. Toa sababu za jibu lako swali namba 15

1) _____

2) _____

17. Je, Mwenzi wako pia anatamani / anahamu ya kuwa na mtoto /watoto hapo baadaye?

1) Ndiyo

2) Hapana [ ]

18. Dini ina umuhimu wowote katika kukufanya wewe utamani kuwa na mtoto?

1) Ndio

2) Hapana [ ]

19. Toa sababu za jibu lako la namba 18

1)_____

2) _____

20. 'Nataka kuzaa mtoto"

1) Ndiyo – **nenda swali la 21**

2) Hapana – **nenda swali la 22** [ ]

21. Unataka kuzaa watoto wangapi?

1) Mmoja

2) Wawili

3) Watatu

4) Zaidi ya watatu [ ]

22. Kuna msukumo wowote ule wa kidini unaokufanya atake kuzaa mtoto?

1) Ndio

2) Hapana [ ]

23. Toa sababu za jibu lako la swali namba 22

1)_____

2)_____

SEHEMU YA TATU

Kumshirikisha Mwenza kuhusu hali yako ya kuishi na virusi vya ukmwi.

24. Je, unafahamu kuwa mwenziwako anaishi na virusi vya ukimwi au la ?

1) Ndiyo- **nenda swali la 26**

2) Hapana – **nenda swali la 25** [ ]

25. Eleza ni kwanini hujui kuwa mwenziwako anaishi na virusi vya ukimwi au la?

1) _____

2)_____

26. Je, mwenziwako anafahamu kuwa anaishi na virusi vya ukimwi?

1)Ndiyo

2) Hapana [ ]

27. Toa sababu ya jibu la swali namba 26?

1) _____

2) _____

28. Je, Kama utajua kuwa mwenziwako anaishi na virusi vya ukimwi, utatamani kuzaa nae mtoto?

    1) Ndiyo
    2) Hapana [ ]

29. Kama mwenziwako atajua kuwa unaishi na virusi vya ukimwi, je unafikiri atatamani kuzaa mtoto na wewe?

    1) Ndio
    2) Hapana [ ]

30. Je mama anaeishi na virusi vya ukimwi anaweza kuzaa mtoto ambaye hana maambukizi ya virusi vya ukimwi?

    1) Ndio
    2) Hapana
    3) Sijui [ ]

Appendix III

Consent Form (English version)

Factors associated with fertility desires and intentions of HIV positive individuals who attending CTC in Dar-ES-Salaam

You are being invited to take part in a study. Before you decide, it is important for you to understand why the research is being done. Please take time to read/listen to the following information carefully.

Ask any question if there is anything that is not clear or if you would like more information

Purpose of this Study

The purpose of this study is to investigate the fertility desires and intentions of HIV positive individuals who are on anti retroviral treatment in Dares Salaam

Why I have been chosen?

You have been chosen because we know you are person living with HIV/AIDS and you attend Care and Treatment Center (CTC) for HIV treatment or follow up.

What Participation Involves

If you agree to participate in the study, you will only be required to answer some questions according to what you genuinely know.

Confidentiality

You will be given Identification number which will be written in the questionnaires and not your name.

All information collected about you during the course of research will be kept strictly confidential.

Risks

We do not expect that any harm will happen to you because of joining in this study.

Rights to Withdraw

Taking in this study is completely voluntary. You can stop participating in this study any time, even if you have already given your consent.

Benefits

If you agree to take part in this study, you will provide important information that will help to improve the health services to people living with HIV/AIDS in Tanzania.

Appendix IV

Consent form (Swahili version)

FOMU YA RIDHAA

MAELEZO KUHUSU UTAFITI UNAOHUSU TAMAA/HAMU NA UTASHI WA KUZAA KWA WATU WANAOISHI NA VIRUSI VYA UKIMWI.

Unakaribishwa kujiunga na utafiti huu unaoangalia tamaa/hamu na utashi wa mtu anaeishi na virusi vya Ukimwi katika kupata mtoto/Watoto hapo baadae kwa watu wanaohudhuria katika vituo vya matibabu na ufatiaji watu wanaoishi na virusi vya Ukimwi na Ukimwi. Kabla hujaamua kujiunga na utafiti huu ni vizuri ukaelewa kwa nini utafiti huu unafanywa.

Tafadhali sikiliza maelezo kwa makini yanayo husiana na utafiti huu na kama hujaelewa usiogope kuuliza swali ili uweze kueleweshwa zaidi. Tutakuulliza maswali yanayohusu tamaa/hamu na utashi wa mtu kuwa na motto/watoto hapo baadaye hali ya kuwa anaish na virusi vya ukimwi.

Kujiunga kwako ni kwa hiyari na hakutaathiri kwa namna yoyote ile utaratibu wa matibabu yako kwa leo na hapo baadaye.

Kwenye utafiti huu utajibu maswali ambayo yameandaliwa tayari na majibu yako yote yatakuwa ni siri kwa ajili ya utafiti huu.

Tunategemea utafiti huu utakuwa na manufaa kwa watu wanaoishi na virusi vya ukimwi na ukimwi na jamii kwa ujumla hapo baadae.

Hatutatumia jina lako katika utafiti wetu kwa hiyo hapatakuwa na uwezekano wa jina lako kujilikana na mtu yeyote.

Utafiti huu umeandaliwa na Dr Saidi Mpendu, kutoka chuo cha Afya ya Jamii, katika chuo kikuu cha Afya na Sayansi ya Tiba Muhimbili.

P.O. BOX 65000, DAR-ES-SALAAM

Tunashukuru kwa ushirikiano wako.