

Prevalence, predictors and outcomes of HIV serostatus disclosure among HIV positive women in Moshi, Tanzania

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Key abbreviations

| | |
|--------|--|
| ART | Antiretroviral Therapy |
| BHAMC | Better Health for African Mother and Child |
| CTC | (HIV) Care and Treatment Clinic |
| HIV | Human Immunodeficiency Virus |
| KCMC | Kilimanjaro Christian Medical Center |
| MHC | Majengo Health Centre |
| PHC | Pasua Health Centre |
| PMTCT | Prevention of Mother To Child Transmission |
| RCH | Reproductive and Child Health |
| SSA | Sub Sahara Africa |
| STI | Sexually Transmitted Infection |
| TZS | Tanzanian Shilling |
| UNAIDS | Joint United Nations Programme on HIV/AIDS |
| VCT | Voluntary Counseling and Testing |
| WHO | World Health Organization |

Abstract

Background: This study aimed to investigate prevalence, predictors and outcomes of disclosure among HIV positive pregnant women in Moshi, Tanzania.

Methodology: In the study, 246 HIV positive pregnant women were included. Information about socio-demographic background and thoughts about HIV positive people in the community was collected in the enrolment questionnaire. The women were followed from third trimester antenatal to one year postnatal with follow-up questionnaires about HIV disclosure and subsequent experiences.

Results: The disclosure prevalence was 78.0%, and the preferred person to tell was the partner (82.8%). The socio-demographic factors that were found to influence disclosure were employment, marital status and age of partner. Unemployed women, women in a steady relationship and women with a young partner (21-30 years) were found to be significant more likely to disclose their HIV status. Acceptance was the most anticipated attitude regarding HIV in the community, which was reported by 58.5% of the women. The major concern prior to disclosure was abandonment, reported by 17.5% of the women. The most reported outcome after disclosure was “no specific reaction”, which 57.8% of the women answered. Only a few women revealed negative outcomes, like abandonment, anger or verbal scolding, and none reported violence.

Discussion: The correlation between the results in our study and the already existing literature about HIV disclosure is relatively good. The disclosure prevalence, the preferred person to disclose to, the barriers to and the outcomes of disclosure that we found in our study seem to be consistent with former studies. In our study, we found three significant factors that facilitate disclosure (unemployment, steady relationship and young partner). In several comparable studies, steady relationship has been stated to positively influence disclosure. Having a steady partner might give the strength to tell the partner about the positive HIV status and many of the women might hope for care and support afterwards. Regarding unemployment and young partner, we found variable results in other studies.

Recommendations: Free or low cost services and treatment, better education around HIV and a safe and encouraging health system will hopefully help increasing disclosure rates and adherence to treatment as well as reducing HIV transmission.

Preface

A desire to travel to a developing country to see, learn and participate in the health system was the start and drive of this student thesis.

It has been interesting and suggestive to experience the differences in the health system between Tanzania and Norway. To see that HIV and malaria are relatively common diseases in Tanzania, to witness that broad-spectrum antibiotics are prescribed in large quantities and to see deliveries with a limited access to equipment and medicines.

Thank you, Babill Stray-Pedersen and Sia Msuya for the opportunity and help to organize this fieldwork trip to Moshi, Tanzania. Thank you, also, for your help and commentaries while writing this thesis.

Thank you, Mama Msuya and your family for your hospitality, for giving us a place to stay and for introducing us to African food, people and culture.

And thank you to the health personnel at both Majengo Health Centre and Pasua Health Centre for being so including and helpful. We are grateful for all the help with translating the questionnaires used in this study.

Index

| | |
|--|-----|
| Key abbreviations..... | III |
| 1 Introduction..... | 1 |
| 1.1 Problem statement..... | 1 |
| 1.2 Background..... | 1 |
| 1.2.1 About Tanzania, Kilimanjaro Region and Moshi..... | 1 |
| 1.2.2 About health services in Tanzania and Moshi..... | 2 |
| 1.2.3 About HIV..... | 4 |
| 1.3 Literature review..... | 5 |
| 1.3.1 Prevalence of HIV disclosure and to whom..... | 6 |
| 1.3.2 Factors influencing HIV disclosure..... | 7 |
| 1.3.3 Barriers to HIV disclosure..... | 9 |
| 1.3.4 Outcomes of HIV disclosure..... | 9 |
| 1.4 Justification..... | 10 |
| 2 Objectives..... | 11 |
| 2.1 Broad objectives..... | 11 |
| 2.2 Specific objectives..... | 11 |
| 2.2.1 Prevalence of HIV positive women disclosing their serostatus..... | 11 |
| 2.2.2 Description of whom the HIV positive women chose to disclose to..... | 11 |
| 2.2.3 Factors influencing disclosure..... | 11 |
| 2.2.4 Outcomes of disclosure..... | 11 |
| 3 Methodology..... | 12 |
| 3.1 Study area..... | 12 |
| 3.2 Study design..... | 12 |
| 3.3 Study population..... | 12 |
| 3.3.1 Inclusion..... | 12 |
| 3.3.2 Exclusion..... | 12 |
| 3.4 Sampling method..... | 13 |
| 3.5 Data analysis plan..... | 13 |
| 3.5.1 Data processing..... | 13 |
| 3.5.2 Data analysis..... | 13 |
| 3.6 Ethical clearance..... | 14 |

| | | |
|-------|--|----|
| 4 | Results | 15 |
| 4.1 | Prevalence of disclosure | 15 |
| 4.2 | To whom the women disclosed | 16 |
| 4.3 | Factors influencing disclosure | 16 |
| 4.3.1 | Socio-demographic factors for the HIV-positive woman and her partner | 16 |
| 4.3.2 | Thoughts about HIV in the community | 20 |
| 4.4 | Outcomes | 22 |
| 5 | Discussion | 23 |
| 5.1 | Discussion of main results | 23 |
| 5.2 | Limitations | 26 |
| 5.3 | Conclusion and recommendations | 28 |
| 6 | References | 30 |
| 7 | Appendixes | 33 |

1 Introduction

1.1 Problem statement

HIV is a chronic viral infection with 35 million people worldwide suffering from it; 70% of them live in Africa (1). Nearly 60% of people living with HIV (PLWHIV) in sub Sahara Africa (SSA) are women of reproductive age. This pattern of women predominance differs from other affected regions. Women in this setting are also poorer and depend on their partners or relatives. HIV disclosure means to reveal your HIV status voluntarily to someone and is important for HIV preventive behavior. This thesis will present different aspects of HIV disclosure, with data collected from two health centers in Moshi, Tanzania. Prevalence of HIV disclosure, preferred person to tell, factors influencing disclosure and experiences after disclosure will be presented, discussed and compared with other studies.

1.2 Background

1.2.1 About Tanzania, Kilimanjaro Region and Moshi

The United Republic of Tanzania is a country in East Africa. It has a total area of 945 454 square kilometers, where water bodies contributes with 61 500 square kilometers. The country consists of Tanzania Mainland and the Islands of Zanzibar. Total population in 2012 was 44 928 923. The country is divided into 30 administrative regions, 25 on the mainland and five on the Islands of Zanzibar (2). Tanzania borders to Kenya and Uganda in the north, Rwanda, Burundi and the Democratic Republic of Congo in the west, Zambia and Malawi in the south-west, Mozambique in the south and the Indian Ocean in the east. Dodoma is the capital and Dar es Salaam is the major commercial city. The national language is Kiswahili, but English is also used in communication. The official currency is Tanzanian Shilling (3).

The Kilimanjaro Region is located in the north-eastern part of Tanzania and total population in 2012 was 1 640 087. It borders to Kenya in the north, Tanga Region in the south, Manyara Region in the south-west and Arusha Region in the west. The regional capital is the municipality of Moshi (2). The region consists of seven districts: Rombo, Siha, Hai, Mwangi, Same, Moshi Rural and Moshi Urban (4).

Moshi Municipal Council was founded in 1988 and is the same as the Moshi Urban district. It is administratively divided into 21 wards. Majengo and Pasua are two of them (5).

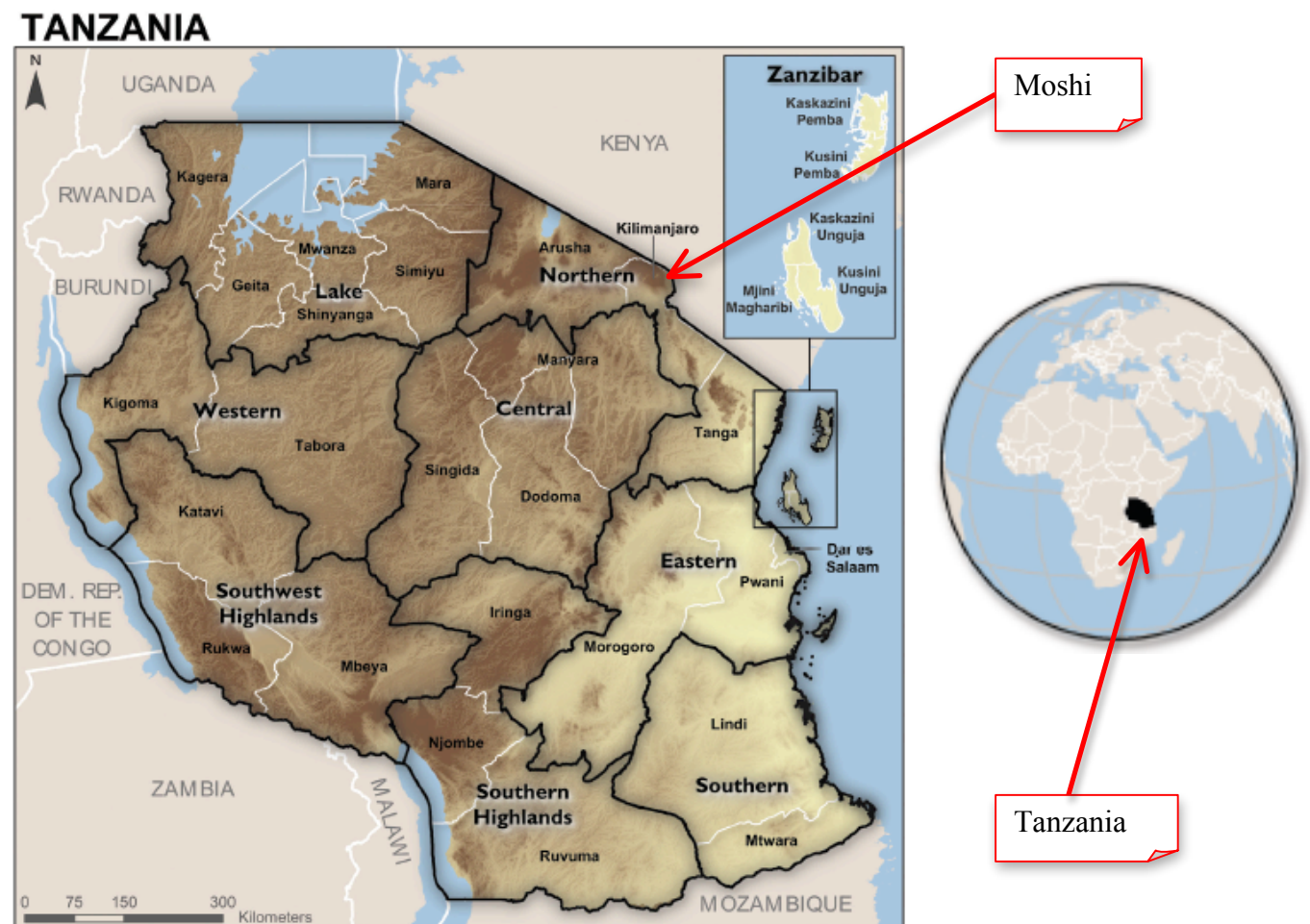


Figure 1. Map of Tanzania, including Moshi (6).

1.2.2 About health services in Tanzania and Moshi

Tanzania

The institutions that provide health services in Tanzania are dispensaries, health centers, district hospitals, regional hospitals and referral consultant hospitals. The ownership is either governmental, faith-based or private (2).

Moshi

Moshi Municipal Council has 13 departments, and the Health department is one of them. There are 64 health facilities in Moshi: seven hospitals, seven health centers, 47 dispensaries, one maternity home and two dental clinics.

The central government, partners and Moshi Municipal Council support many programs in these health facilities. Among the programs are Care and Treatment Clinics (CTC) for patients living with HIV, Voluntary Counseling and Testing (VCT) for HIV, Reproductive and Child Health (RCH), including Prevention of Mother to Child Transmission (PMTCT) etc. These programs have contributed to reduce death related to poor services, and also to reduce maternal death and death of children under five years (7).

Pasua Health Centre and Majengo Health Centre

Pasua Health Centre (PHC) and Majengo Health Centre (MHC) are two health centers in Moshi that offer Reproductive and Child Health services. These RCH-services include antenatal and postnatal care, family planning, immunization, nutrition care and PMTCT (7). The two health centers also have labour ward and delivery services, outpatient clinic, minor theatre services, CTC-clinic, laboratory services and drug dispensary. PHC has in addition an inpatient ward, with approximately 30 beds, while MHC has a dental clinic. PHC has about 55 employees and MHC has about 40 employees. Both health centers also have a BHAMC-office (see next section) (8, 9).

Better Health for African Mother and Child

BHAMC is a collaborative research program between University of Zimbabwe (UZ), Kilimanjaro Christian Medical Centre (KCMC) in Tanzania, Moshi Municipal and the University of Oslo (UiO) funded by the Letten Foundation (LF) of Oslo, Norway (1). The planning of the primary study started in 2000, with the aim to carry out health research from high and medium HIV-1 prevalent countries. The study started in 2002 as an observational cohort and the original purpose was to assess the role of sexually transmitted infections (STIs) on mother to child transmission, including HIV (10).

Pregnant women were interviewed and screened for STIs at health centers in Harare, Zimbabwe and Moshi Urban District, Tanzania. Follow-ups of mother and child were done at

the same places. The study has been supervised from the referral hospitals/universities mentioned above. Over the years the program has grown, and the data that has been collected offers a great opportunity to study various aspects of the HIV problem (11). In our study about HIV disclosure we have used data from this research program.

1.2.3 About HIV

HIV (human immunodeficiency virus) is a chronic viral infection with 35 million people worldwide suffering from it. The infection is mostly spread in Africa with nearly 25 million people living with the disease (12).

In Tanzania, the HIV prevalence among people 15-49 years is 5.1%. The prevalence among women is higher (6.2%) than among men (3.8%), and prevalence is also higher in urban areas than in rural. The prevalence differs between different regions in the country. In the Kilimanjaro region, where our study takes place, the HIV prevalence is 3.8% for people 15-49 years old (6).

HIV infection is acquired from sexual intercourse with an infected partner, contact with infected blood/blood products or transmission from an infected mother to her child. The transmission from mother to child can occur during pregnancy, delivery or breast-feeding. Most people in Africa acquire the infection from unprotected sex with an infected partner (13).

When the virus enters the body, it replicates inside host cells called CD4+ T-lymphocytes. These cells contribute to the normal function of the immune system and when the virus affects the cells, they lose their function and die. The number of CD4+ T-lymphocytes is therefore a reflection of weakening cellular immunity, which can manifest as the appearance of opportunistic infections such as intestinal worms, candidiasis and tuberculosis. The most important opportunistic infection is tuberculosis (13).

People with HIV do not die because of the HIV infection; they die because of the complications that come with the poor immune system. Fortunately, most of the opportunistic infections can be treated (13).

To diagnose HIV in adults and children over 18 months, a rapid HIV test or an enzyme immunoassay (EIA) is used to detect antibodies in the blood. If one test is positive the other test is also performed to confirm the HIV diagnosis (13).

There is no cure for HIV, but there is treatment called ART (antiretroviral therapy) that helps the immune system and decelerates the viral replication. Treatment varies according to the number of CD4+ cells and the patient's comorbidity. The treatment includes ARTs and/or different kinds of prophylaxis against opportunistic infections. It is also important with counseling according to reduction of transmission risk (13).

To get access to treatment and lifestyle advice, there is free CTC-clinics (care and treatment clinics) for HIV positive people, where they can get counseling, testing and treatment. These clinics are either at hospitals or primary health centers. The CTC must include one family caregiver and a health team consisting at least one triage nurse, one trained doctor and a treatment/adherence nurse (13).

1.3 Literature review

In this section we will present articles, theses and review papers that have been published about the subject HIV disclosure. Some studies focused on disclosure to only partner, while others included disclosure to multiple categories of people. The different studies collected their data in varying contexts and this might influence the disclosure rate. For example women who attended VCT were probably more motivated and had thought about testing for a long time, compared to women who attended antenatal clinics for a routine control and unexpectedly got the HIV diagnosis. All of these key points are important to keep in mind when we submit results from different studies.

In 2003, WHO published a review paper (14) about rates, barriers and outcomes of HIV status disclosure. Studies from both the developed and the developing world were included in this paper, and the focus was on disclosure to sexual partners. In some studies both men and women were included, while in other only women. It has been over ten years since this review paper was published and there is a chance that the situation around HIV disclosure has changed. Therefore we consider this literature review as a useful way to map out the present time situation.

Because our own study was done in Moshi, Tanzania, we will focus on studies from the sub Sahara Africa to have comparable data. We will look at studies from 2003 – 2013 to get the best data corresponding with today's situation.

1.3.1 Prevalence of HIV disclosure and to whom

WHO (14) established that the prevalence of disclosure to sexual partner was higher among women in the developed world (42-100%), compared to women in the developing world (16.7-86%), including both pregnant and non-pregnant women. It further revealed that the disclosure prevalence to sexual partner increased over time since diagnosis, and that women disclosed to multiple categories of people, but there was no significant pattern of to whom. According to the review there was a disparity between the intention to disclose and the actual disclosure (14).

In a Master of Public Health Dissertation from Tanzania in 2012 (15), the overall prevalence of disclosure was 98%. Both men and women participated. The study also revealed that the prevalence of disclosure to spouses was 56.3%. More men (74.2 %) than women (47.7%) chose to disclose to their partner. It is noticeable that 32.6% preferred to tell a relative and 16.4% specified that they preferred to tell their mother. Most participants also preferred to tell a person of the same gender (15).

Another study from Tanzania, published in 2013 (16), only included HIV positive pregnant women and the prevalence of disclosure to their partner was 41%. An additional study in 2013, including 3538 men and women in Tanzania, Kenya and Namibia (17) showed that 80% disclosed their HIV status to their partner and that women were significantly less likely to disclose compared to men.

We also looked at two studies from Nigeria. One study from year 2006 (18) showed that 77% of the men and women that participated disclosed their HIV status. 23.6% revealed their HIV status to their partner. And, in opposite to the studies in Tanzania; women were more likely to disclose their HIV status compared to men. Noticeable is also that 27.8% chose to disclose the HIV status to their pastors (18). We have not found this high prevalence of disclosure to pastors anywhere else. The other study from Nigeria from 2013 included only women. A total of 90.5% of the participants disclosed their HIV status to their partners (19).

Two studies from Ethiopia were published in 2008 and 2010 (20, 21). In both studies the prevalence of HIV disclosure to partner was high with 85.7% and 90.8% respectively. The study from 2010 only had female participants, but the study from 2008 included both gender and the disclosure prevalence was equal between men and women (20, 21).

According to WHO (14), the prevalence of HIV disclosure vary from 16.7-86% in the developing world. Looking at the studies above, all report a prevalence of 77% or more. It seems like the overall prevalence of HIV disclosure has been increasing since the WHO paper was published in 2003, and this is a very positive progress.

A study from four Sub-Saharan countries in 2013 (22), reported that the HIV disclosure to partner varied between the countries, from 32.7 – 92.7 %; both men and women were participating. This tells us that there is still a big variation in the prevalence of HIV disclosure but that the percentage of disclosure in general seems to be increasing.

1.3.2 Factors influencing HIV disclosure

According to WHO (14), factors found to be positively associated with disclosure were length of time since diagnosis and severity of illness. Other factors that motivated people to disclose were sense of ethical responsibility, concern for partner's health, social support, minimizing stress, facilitating HIV preventive behavior and counseling.

In the dissertation from Tanzania (15), education, middle-aged people (25-49), occupation and high income were statistically associated with higher possibility of disclosure.

Participants with no former education were more reluctant to disclose. People who had received counseling on how to disclose and people with knowledge about the importance of disclosure were more likely to disclose. Condom use was associated with a high prevalence of disclosure (15).

Another Tanzanian study (16) also indicated that education, high income and condom use was facilitating factors. This study showed that age under 25 was positively associated with disclosure and that occupation was not influencing disclosure. Never given birth before, partner with secondary or higher education, economic independency, discussing with partner before testing and knowing the status before pregnancy were other factors found to be

facilitating. Given birth before, partner's age, occupation, religion and knowledge of PMTCT were not found to influence HIV disclosure in this study (16).

Higher education was also positively associated with disclosure in Nigeria (18). Being married and having expectations of economic, spiritual, emotional and social support were also related to disclosure.

Four Sub-Saharan countries (22) also concluded that higher education was positively associated with disclosure. Being male and living in urban areas were other facilitating factors. The same study showed that preventing HIV transmission, need for care and keeping the integrity of the relationship were reported reasons for disclosure. On the other hand, membership to support groups was negatively associated with disclosure (22).

Attending a support organization was in a study from Uganda from 2008 (24), however positively associated with disclosure. Being married, using condom and knowing partner's HIV status were also positive predictors for disclosure in this study.

In Ethiopia (20, 21) knowing the partner's HIV status was a facilitator for disclosure. Being married and being on ART were also associated with disclosure in one of the studies (20), while in the other study (21) advanced disease stage, negative self-image, living with partner and talking about HIV testing with partner were positive predictors for disclosure.

Monogamous marriages and duration of disease were strongly associated with HIV disclosure in Nigeria (19).

Several of the facilitating factors described in WHO's review paper (14) are also in more recent studies mentioned as important factors for disclosure, for example duration of disease, severity of disease, social support and facilitating HIV preventive behavior. In the more recent studies we have found some other factors that have been frequently mentioned. Increased education was mentioned in four of the eight studies (15, 16, 18, 22). Being married was also reported in four studies (18-20, 24), where monogamous marriage was emphasized in one of these four (19). In addition, knowing the partner's HIV status (20, 21, 24) and/or using condom (15, 16, 24) have been mentioned as facilitating factors in several of the studies.

1.3.3 Barriers to HIV disclosure

Many studies have focused on reasons for not disclosing and what HIV positive people might worry about.

WHO (14) summarize that the most common barriers to disclosure were fear of abandonment, fear of rejection/discrimination, fear of violence and fear of upsetting family members. Fear of abandonment was the major barrier and fear of violence was more frequently in studies from the developing world than the developed world (14).

A Ugandan qualitative study from 2012 (23), showed that fear of abandonment was the main barrier, but also violence and accusation of bringing HIV infection into the family were major barriers to disclosure.

However, in Tanzania (15), fear of physical violence showed no statistical significance on HIV disclosure. People who chose not to tell their status were more afraid of stigma, discrimination and divorce.

In Nigeria (18), fear of stigmatization, fear of confidants spreading the information, fear of accusation of infidelity and abandonment were common barriers.

Also in Ethiopia (20), fear of abandonment and stigmatization were common barriers for disclosure.

1.3.4 Outcomes of HIV disclosure

When it comes to outcomes, WHO (14) concludes that positive outcomes were common and included increased support, acceptance and kindness, decreased anxiety, fewer symptoms of depression and strengthening of the relationship. The paper also says that disclosure can lead to increased HIV preventive behavior. The percentages of people reporting positive outcomes are not mentioned. Negative outcomes like blame, abandonment, anger, violence, stigma and depression were however more seldom reported. Violence following disclosure was a reported outcome in 3.2-45% of the cases, more common in studies from the developing world than from the developed world (14).

Ugandan studies (23, 24) showed that participants mainly experienced positive outcomes from partner. The participants described positive outcomes like reduced risk behavior, partner

testing, care-seeking behavior, less anxiety, increased sexual communication and planning of the future.

In Ethiopia (21), 54% of the participants were afraid of negative reaction from partner, but only 5% reported this after disclosure. In the same study, 80.3% reported supportive reaction from partner.

However, negative outcomes were found in another Ethiopian study (20), where 59.3% of the HIV positive women experienced a negative partner reaction after disclosure. The women reported blame and anger particularly, but also stigmatization, abandonment, violence and break-up were mentioned.

In Nigeria (19), 66.7% of the women reported initial supportive reaction from partner, and over time this number increased to 81.2%. Only 3.2% reported abusive and violent response to disclosure.

Both WHO's report (14) and more recent studies show that positive outcomes are more common than negative outcomes. In two of the five studies over 80% of the participants reported supportive reaction from partner (19, 21). Negative outcomes were in the same two studies reported as fewer than 5%.

1.4 Justification

We know that HIV disclosure is a big issue in Tanzania and in many other countries with high HIV prevalence. Lack of knowledge, stigmatization and many other factors make it hard for HIV positive people to reveal their serostatus, especially among women with low social and economic status.

We have investigated HIV disclosure prevalence among pregnant women in Moshi and to whom the women disclosed. We have also looked at different facilitating factors, barriers and outcomes of disclosure.

By exposing the factors that influence HIV status disclosure, we hope that much can be done to reduce the counteracting factors. With disclosure the HIV positive person can receive care and support from whom they have told. Disclosure might further lead to better adherence to treatment, partner testing, decreasing sexual transmission and PMTCT.

2 Objectives

2.1 Broad objectives

To investigate the prevalence of HIV disclosure among HIV positive women, to whom they disclose to, factors influencing disclosure and outcomes of disclosure.

2.2 Specific objectives

2.2.1 Prevalence of HIV positive women disclosing their serostatus

2.2.2 Description of whom the HIV positive women chose to disclose to

- Partner
- Mother
- Friend
- Others (siblings, grandparents, other relatives...)

2.2.3 Factors influencing disclosure

- *Socio-demographic factors for the HIV positive woman*: health center, age, number of pregnancies, religion, employment, income, education, marital status, sexual behavior (polygamy, multiple partners etc.) and alcohol.
- *Socio-demographic factors for the partner*: age and education.
- *Thoughts about HIV in the community*: attitude towards HIV positive people in the community and concerns about HIV disclosure.

2.2.4 Outcomes of disclosure

3 Methodology

3.1 Study area

The interviews and data collection was conducted at two primary health centers, Pasua Health Centre and Majengo Health Centre. These clinics are situated in Moshi Urban District, Kilimanjaro Region, Northern Tanzania.

3.2 Study design

Our study is an interviewed-based-cohort from 2005 to 2013. It is a part of the BHAMC-project that started in 2002 (see Background section).

3.3 Study population

HIV positive pregnant women who attended Pasua or Majengo Health Centre in Moshi Urban District in the period 2005 to 2013. The women were supposed to come to enrolment in their third trimester of pregnancy, and to follow-ups at one month, three months, six months and twelve months after childbirth. Attendance to follow-ups varied from zero to all four follow-ups.

3.3.1 Inclusion

HIV positive pregnant women who attended Pasua or Majengo Health Centre in Moshi Urban District in the period 2005 to 2013. Some of the women participated in the survey several times because of multiple pregnancies, but only the first pregnancy of each woman was included in our study. In addition to enrolment, the women had to attend at least one follow-up to be included.

3.3.2 Exclusion

For the women with multiple pregnancies, pregnancies after the first one were not included in this study. The women who did not attend enrolment and at least one follow-up were neither included.

3.4 Sampling method

Our study is a part of the BHAMC-project that started in 2002. Data collection was done with interviews in the period from 2005 to 2013, and was performed by health personal at Pasua and Majengo Health Centre. The interviews were implemented in Swahili and the answers were written down on the questionnaires. Each woman got an ID-number and a file, which contained the different questionnaires. The questionnaires (see Appendix) are mostly in Swahili, with some English translation. The questions are of different character; multiple-choice questions, open-ended questions and yes/no. In several of the multiple-choice questions, the women could choose more than one answer.

The interviews involved enrolment questionnaires and follow-up questionnaires at one, three, six and twelve months after childbirth. The enrolment questionnaires, which were done during the third trimester of pregnancy, included information about the woman and her socio-economic background, her knowledge and thoughts about STIs/HIV and information about the father of the child. The follow-up questionnaires included data about the physical health of the mother, sexual behavior, contraceptive methods and HIV disclosure.

3.5 Data analysis plan

3.5.1 Data processing

The data processing was done at the BHAMC-offices at Pasua and Majengo Health Centre in January and February 2014. Before data processing we vocally got the questionnaires translated from Swahili to English. The data were transferred from the written questionnaires to variables in SPSS. During this transfer we got help to translate open-ended questions by people working at the health centers. Coding of open-ended questions (from strings to numeric) and cleaning of data were done before the analysis.

3.5.2 Data analysis

We used SPSS version 14.0 for analysis and Excel for making tables and diagrams. Comparison between groups was made using chi-square test for categorical values and t-test for continuous variables. P-value of < 0.05 was taken as statistical significant result.

3.6 Ethical clearance

The initial BHAMC-project that started in 2002 sought and got ethical clearance from The Ministry of Health, Tanzania and from the Research and Ethical Committee, Kilimanjaro Christian Medical University College. All the data collected were anonymous, and confidentiality and personal privacy was maintained during our entire study.

4 Results

In our study 514 HIV positive pregnant women were enrolled, but in the analysis we included only the first pregnancy of each woman, which gives a number of 463 women. Another criterion was attendance in at least one follow-up. Since a number of women did not attend follow-ups, we got a study population of 246 HIV positive women, shown in Figure 2.

4.1 Prevalence of disclosure

In the follow-up questionnaires the women were asked if they had disclosed their HIV status to someone. Among the 246 participants, 192 (78.0%) disclosed their status.

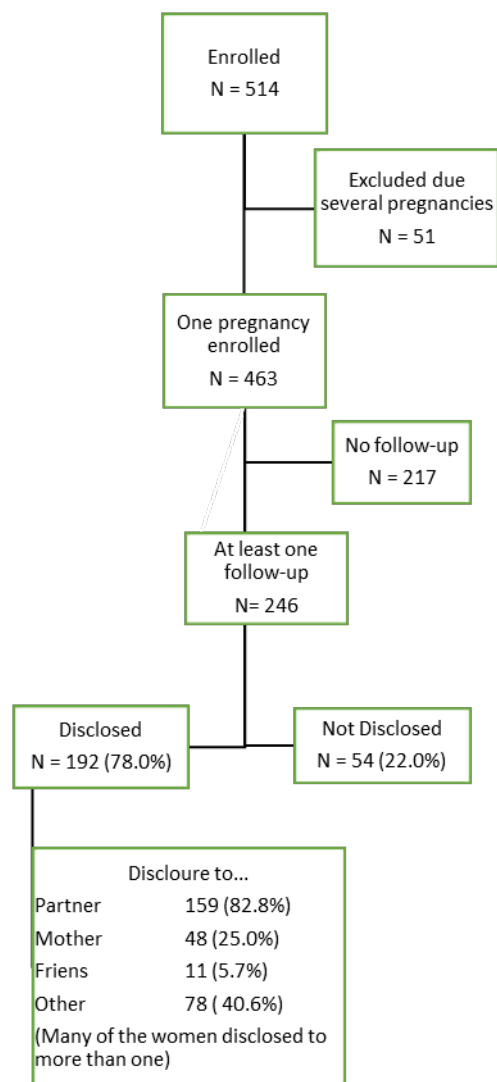


Figure 2. Chart of study population including disclosure prevalence and to whom the women disclosed. Notice that many of the women disclosed to more than one person.

4.2 To whom the women disclosed

The 192 women who disclosed were also asked to whom they disclosed. A total of 159 (82.8%) disclosed to partner, 48 (25.0%) to mother, 11 (5.7%) to a friend and 78 (40.6%) to another person, this is shown in Figure 2. This gives a total of 296 disclosures, which means that many of the women disclosed to more than one.

4.3 Factors influencing disclosure

4.3.1 Socio-demographic factors for the HIV-positive woman and her partner

Table 1. Socio-demographic factors among the 246 HIV positive women disclosing and not disclosing their HIV status. ns. = non-significant

| | Total | | Disclosed | | Not disclosed | | Significance (p-value) |
|------------------------------|------------|------------|------------|--------------|---------------|--------------|------------------------|
| | No. | % | No. | % | No. | % | |
| | 246 | 100 | 192 | 100.0 | 54 | 100.0 | |
| Health center | | | | | | | |
| Majengo HC | 147 | 59.8 | 120 | 62.5 | 27 | 50.0 | ns. |
| Pasua HC | 99 | 40.2 | 72 | 37.5 | 27 | 50.0 | |
| Age of mother | | | | | | | |
| < 20 yrs | 8 | 3.3 | 7 | 3.6 | 1 | 1.9 | ns. |
| 20-30 yrs | 157 | 63.8 | 122 | 63.5 | 35 | 64.8 | |
| > 30 yrs | 81 | 32.9 | 63 | 32.8 | 18 | 33.3 | |
| Number of pregnancies | | | | | | | |
| 1 pregnancy | 35 | 14.2 | 26 | 13.5 | 9 | 16.7 | ns. |
| 2-4 pregnancies | 192 | 78.0 | 150 | 78.1 | 42 | 77.8 | |
| > 4 pregnancies | 19 | 7.7 | 16 | 8.3 | 3 | 5.6 | |
| Religion | | | | | | | |
| Christian | 148 | 60.2 | 118 | 61.5 | 30 | 55.6 | ns. |
| Muslim | 97 | 39.4 | 73 | 38.0 | 24 | 44.4 | |
| Employment | | | | | | | |
| Steady employment | 31 | 12.6 | 18 | 9.4 | 13 | 24.1 | 0.004 |
| No employment | 214 | 87.0 | 173 | 90.1 | 41 | 75.9 | |
| Income (per month) | | | | | | | |
| No income | 84 | 34.1 | 66 | 34.4 | 18 | 33.3 | ns. |
| < 30 000 TZS | 74 | 30.1 | 56 | 29.2 | 18 | 33.3 | |
| 30-59 000 TZS | 25 | 10.2 | 21 | 10.9 | 4 | 7.4 | |
| 60-100 000 TZS | 8 | 3.3 | 6 | 3.1 | 2 | 3.7 | |
| > 100 000 TZS | 4 | 1.6 | 2 | 1.0 | 2 | 3.7 | |
| Education | | | | | | | |

| | | | | | | | |
|------------------------------|-----|------|-----|------|----|------|-------|
| No education | 11 | 4.5 | 9 | 4.7 | 2 | 3.7 | ns. |
| Primary school | 196 | 79.7 | 149 | 77.6 | 47 | 87.0 | |
| Secondary school 1-4 | 36 | 14.6 | 31 | 16.1 | 5 | 9.3 | |
| Secondary school 5-6 | 1 | 0.4 | 1 | 0.5 | 0 | 0.0 | |
| Higher institution | 2 | 0.8 | 2 | 1.0 | 0 | 0.0 | |
| Marital status | | | | | | | |
| Married | 116 | 47.2 | 96 | 50.0 | 20 | 37.0 | 0.01 |
| Cohabiting | 103 | 41.9 | 83 | 43.2 | 20 | 37.0 | |
| Single | 21 | 8.5 | 9 | 4.7 | 12 | 22.2 | |
| Divorces, separated, widowed | 6 | 2.4 | 5 | 2.6 | 1 | 1.9 | |
| Polygamy | | | | | | | |
| No | 134 | 54.5 | 108 | 56.3 | 26 | 48.1 | ns. |
| Yes | 96 | 39.0 | 74 | 38.5 | 22 | 40.7 | |
| Multiple partners | | | | | | | |
| No | 51 | 20.7 | 40 | 20.8 | 11 | 20.4 | ns. |
| Yes | 195 | 79.3 | 152 | 79.2 | 43 | 79.6 | |
| Alcohol | | | | | | | |
| No | 131 | 53.3 | 105 | 54.7 | 26 | 48.1 | ns. |
| Yes | 115 | 46.7 | 87 | 45.3 | 28 | 51.9 | |
| Age of partner | | | | | | | |
| 21-30 yrs | 79 | 32.1 | 69 | 35.9 | 10 | 18.5 | 0.024 |
| 31-40 yrs | 118 | 48.0 | 89 | 46.4 | 29 | 53.7 | |
| 41-50 yrs | 23 | 9.3 | 18 | 9.4 | 5 | 9.3 | |
| 51-60 yrs | 7 | 2.8 | 3 | 1.6 | 4 | 7.4 | |
| Education (partner) | | | | | | | |
| No education | 2 | 0.8 | 2 | 1.0 | 0 | 0.0 | ns. |
| Primary school | 167 | 67.9 | 133 | 69.3 | 34 | 63.0 | |
| Secondary school 1-4 | 53 | 21.5 | 40 | 20.8 | 13 | 24.1 | |
| Secondary school 5-6 | 10 | 4.1 | 5 | 2.6 | 5 | 9.3 | |
| Higher institution | 9 | 3.7 | 9 | 4.7 | 0 | 0.0 | |

Health center: Among the 246 participants, approximately 60% belonged to MHC and 40% to PHC. There is no significant difference in disclosure between these two groups.

Age of mother: The participating women ranged in age from 17 to 40. In our analysis we divided them into three groups: under 20 years, between 20 and 30 years and over 30 years. Most of the women, almost 64%, were between 20 and 30 years. The group under 20 years contained only 3% of the women, while 33% were over 30 years. The disclosure rates in these age groups are not distinctly different from each other.

Number of pregnancies: The majority of the women, 78%, had been pregnant two to four times, while roughly 14% had their first pregnancy and almost 8% had had more than four pregnancies. There is no obvious difference in disclosure between these three groups.

Religion: Among the participants, approximately 60% were Christians and 40% were Muslims. There was one participant who did not report her religious status. In our analysis, we do not find any significant difference in disclosure between Christians and Muslims.

Employment: As much as 87% of the women reported that they did not have an occupation. Nearly 13% reported steady employment. We can find a significant difference in disclosure depending on their employment status. Women with steady employment rather than women without employment chose to not disclose their HIV status. Among the 54 women not disclosing, 24% had steady employment and this proportion is significantly high. Women without employment are thus more likely to disclose. There was one participant who did not inform about her employment status.

Income: A proportion of 34% had no income, 30% earned < 30 000 TZS and 10% earned 30-59 000 TZS per month. It is noticeable that more than 50% of the women in the study are living underneath the poverty line, based on what they earn. The poverty line is 1.25 \$ per day (25), which corresponds to 70 000 TZS per month (26). Just about 3% earned 60-100 000 TZS and 1.5% of the women had an income exaggerating 100 000 TZS per month. There were 51 missing answers. In our analysis we can not find a noteworthy difference in disclosure between the five groups with diverse income.

Education: When it comes to education, approximately 80% of the women had completed primary school, 15% secondary school 1-4 and 4.5% had no education. Just about 1% had completed secondary school 5-6 or any higher institution. These groups show no significant difference in disclosure rates.

Marital status: Approximately 50% of the women were married, 42% were cohabiting, 8.5% were single while 2.5% were divorced, separated or widowed. Among all the women not disclosing, the singles pose 22% which is noticeable compared to the fact that they constitute only 8.5% in the study population. It is therefore a large proportion of single women who chose not to reveal their HIV status. This is significantly different from the women with a steady partner who in a larger extent chose to reveal their HIV status.

Polygamy: Almost 40% of the participating women reported to live in a polygamous relationship. There were 16 missing answers in this question. However, there is no clear difference in disclosure between the women in monogamous and the women in polygamous relationships.

Multiple partners: Nearly 80% of the women reported to have had more than one partner. We can not find any notable difference in disclosure between the women with only one partner, and the women who had had more than one partner.

Alcohol: A bit more than 50% of the women said that they did not drink alcohol while a bit less than 50% said that they did drink alcohol. There is no evident difference between drinking and not drinking alcohol when it comes to disclosure rates.

Age of partner: The partners ranged in age from 21 to 60. In our analysis we divided them into four groups; 21-30 years, 31-40 years, 41-50 years and 51-60 years. Almost 50% of the partners were in the age group 31-40 years. Approximately one third were in age 21-30 years, while 9% were 41-50 years and 3% were 51-60 years. A total of 19 women did not answer this question. Our analysis shows that women with a young partner (21-30 years) are significantly more likely to disclose their status, than women with partners in older age groups. Women with a partner in the oldest age group (51-60 years) are the least liable to disclose their status.

Partner's education: Two thirds of the women reported that the father of the child had primary school education, while approximately 20% had completed secondary school 1-4. A smaller proportion of the women reported that the father had no education, secondary school 5-6 or higher institution. When comparing these groups considering the disclosure rate, we can not find any particular difference.

4.3.2 Thoughts about HIV in the community

Attitude towards HIV positive people in the community

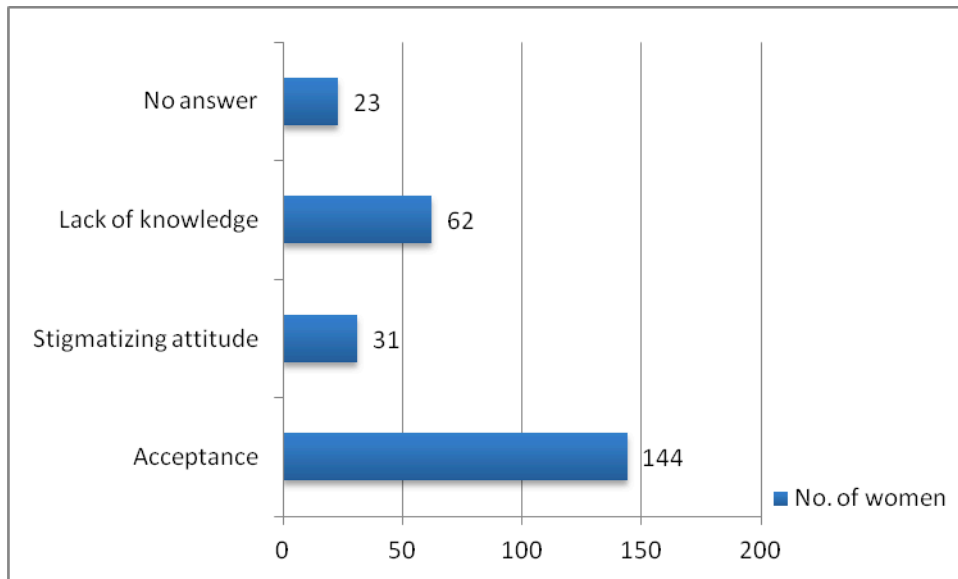


Figure 3. Thoughts about the attitude towards HIV positive people in the community. Responses from 246 HIV positive women that were allowed to give more than one answer.

All the attending women were asked about how people with HIV are treated by other citizens in the community. We have divided their answers into three categories: acceptance, stigmatizing attitude and lack of knowledge.

The overall most reported attitude is acceptance, which was reported by 144 (58.5%) women. Only 31 (12.6%) women believed that the attitude would be stigmatizing, while 62 women (25.2%) did not know what kind of attitude the community had.

Concerns about HIV disclosure

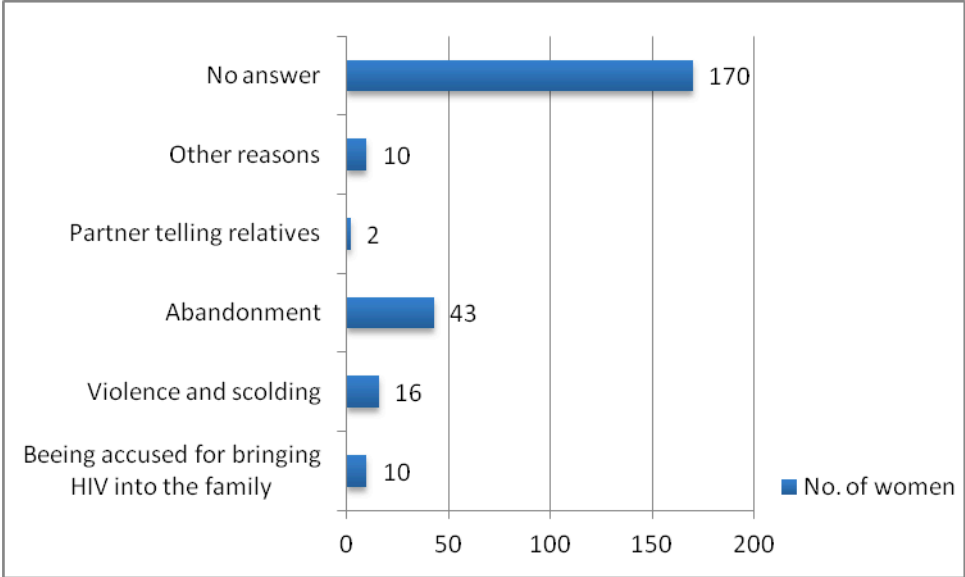


Figure 4. Concerns about HIV disclosure to partner. Notice that the women were allowed to give more than one answer, and that many chose to not answer.

In the enrolment the women were asked about barriers to disclosure. The women got five alternatives; some women answered more than one while other did not answer at all. The women who specified another reason for why they did not want to tell replied for example that they wanted the partner to test himself before telling the result, or the women reported that they had no contact with the father of the child.

A total of 43 (17.5%) women reported abandonment as their major concern to disclosure. Violence and scolding were the second most reported concern, reported by 16 (6.5%) women.

4.4 Outcomes

Outcomes of disclosure

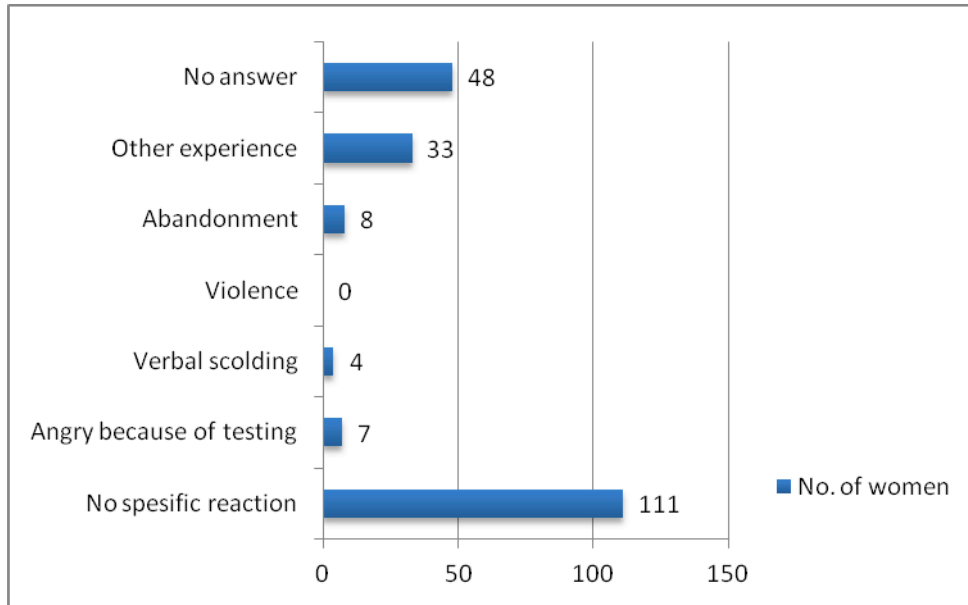


Figure 5. Reported experiences after disclosure. Total number of women disclosing = 192. Notice that the women were allowed to give more than one answer.

The 192 women who disclosed to someone were asked which experiences they had had after disclosing. This question was asked at the three and six month's follow-ups. Some of the women chose to not answer this question while other reported multiple experiences.

Examples of other experiences were receiving advices (for example; to test again and to get treatment), quarrel, partner who doesn't believe the result, partner being quiet, partner who says he will go for testing, encouragement, partner being scared, abandonment from other than partner, partner blaming her for cheating etc.

The most reported outcome was "no specific reaction", which 111 (57.8%) women answered. Only a few women revealed negative outcomes, like abandonment, anger and verbal scolding. None reported violence.

5 Discussion

5.1 Discussion of main results

The prevalence of disclosure in our study was 78.0%. This correlates well with the already existing literature. Six of eight studies (15, 17-21) that we submitted in the literature review showed a disclosure prevalence of 77% or more.

In our study 82.8% disclosed their HIV status to their partner, 25% to their mother, 5.7% to a friend and 40.6% to another person. Most studies that we presented in the literature review looked at disclosure to partner, with a prevalence ranging from 16.7-92.7% (14-22). Our prevalence of disclosure to partner (82.8%) is in the upper margin of this interval. However, the literature about disclosure to other categories of people than the partner is limited and it is therefore difficult to make any statement about this. Telling partner can result in many positive outcomes, both individual and for the community. The partner can provide care and support, he can test himself and they can attend a clinic with VCT. Knowing partner's HIV status can also prevent further transmission to other spouses in a polygamous marriage. Information to non-infected partner can increase the use of condom. Disclosure can also improve adherence to treatment and PMTCT.

Among our results from section 4.3 Factors influencing disclosure, we found three significant factors that stood out from the rest:

- 1. Significant more unemployed women chose to disclose their HIV status, in comparison to women with a steady employment.*

In one study from Tanzania (15) occupation was statistically associated with higher possibility of disclosure, while in another Tanzanian study (16) occupation was not found to influence disclosure. These assertions differ and it is difficult to make any statement about how employment influences disclosure due to few studies.

The same studies (15, 16) revealed that high income was a facilitating factor for disclosure. Results from our own study could not tell if variety in income could influence disclosure. One can believe that high income and employment is associated, and therefore the two Tanzanian studies from the literature review, might contradict our result.

Four of the eight studies in the literature review (15, 16, 18, 22) emphasized that higher education was correlated with disclosure of HIV status. We could not find significant data about this in our own study but it might be inconsistent with our result if you can assume that higher education is connected to a steady employment.

A steady employment can give the woman a feeling of independence and less need for support. This might have led to the fact that the women in our study did not feel the need to disclose their HIV status. Another possibility is that the employed women who refused to disclose were single, in the need of working and with no partner to disclose to.

2. Our data revealed that married and cohabiting women, rather than single women chose to disclose their HIV status.

Unfortunately, we do not know why many single women chose to not disclose. Possible reasons can be that the women do not have any contact with the father of the child or that the women do not want to tell a former partner.

Many studies about HIV disclosure investigate marital status: In Uganda (24), Nigeria (18, 19) and Ethiopia (20) studies showed that being married is a facilitating factor for disclosure. Another study in Ethiopia (21) revealed that cohabiting facilitates disclosure. All of these studies support our result. One of the studies from Nigeria (19) clarified that they only looked at monogamous marriages. In our study, 40% of the women lived in polygamous relationships, and we could not find any significant difference in disclosure between women in monogamous and polygamous relationships.

Having a steady partner might give the confidence to tell the partner about the positive HIV status and many of the women might expect care and support afterwards. Also the women might think that disclosure can result in partner testing, treatment and a stronger relationship. The study from four Sub-Saharan countries (22) emphasized that preventing HIV transmission, care and keeping the integrity of the relationship are facilitators for disclosure, and these factors almost predict that the women had a steady partner.

3. Age of partner influence disclosure. The women with partners belonging to the youngest age group of 21-30 years are more prone to disclose their HIV status than women with older partners.

It is possible that the women with a partner from the youngest age group also are young themselves. The younger population in Tanzania might have more knowledge and receive more information about HIV and its complications. Therefore they might be more careful with unprotected sex, have a better adherence to treatment and disclose to partner if they are HIV positive. If this is true, we might look at a bright future with less transmission and more openness to disclosure.

The dissertation from Tanzania (15) revealed that having a middle-aged partner (15-49 years) facilitate disclosure. This result correlates with our result to a certain extent due to some overlap in the age groups.

Condom use is found to be a facilitating factor in three of the studies (15, 16, 24) from the literature review. In our study we did not look at condom use, however it is thinkable that young people are more open-minded to use condom. Thus, condom use and young age might be associated and both influence disclosure in a positive way.

We also looked at thoughts about HIV disclosure in the community:

Acceptance is the most reported attitude towards HIV positive people in the community, reported by 58.5% of the women. On the other hand 12.6% of the women believed that the attitude would be stigmatizing.

It is positive to see that acceptance is believed to be widespread, and that a minority reports stigmatization. Social support as a facilitator for disclosure was mentioned in several of the studies submitted in the literature review (14, 18). An accepting attitude towards HIV positive people is probably essential to maintain a good and safe atmosphere for disclosure.

We can not avoid the fact that stigmatization still exists. In three studies from Nigeria, Ethiopia and Tanzania (15, 18, 20), stigmatization is stated as a common barrier to disclosure. It is unfortunate that 12.6% of the women in our study believe that there is stigma towards HIV positive people in the community. We hope that increased education and knowledge around HIV in the future can reduce stigma, so that it no longer will be a common barrier to disclosure.

The major concern prior to disclosure is abandonment, reported by 17.5% of the women. Violence and scolding were the second most reported concern, reported by 6.5% of the women.

It is understandable that the women are afraid of abandonment, because without a partner they might lose both economic and social support. This can in turn lead to poverty, poor health and reduced or no adherence to treatment. Abandonment is in numerous studies (14, 18, 20, 23) mentioned as an important barrier to disclosure, and in some of the studies (14, 23) it is stated to be the main barrier. Fear of violence was also listed as a central barrier (14, 23). To summarize, our findings regarding concerns prior to disclosure correlates well with the already existing literature.

The most reported outcome after disclosure is “no specific reaction”, which almost 60% answered. Only a few women revealed negative outcomes like abandonment, angeriness and verbal scolding, and none reported violence.

We can assume that “no specific reaction” is compatible with a positive experience or absence of negative reactions. In that case, it is positive that the majority of the women have this experience. It is also positive to see that the women seldom reported negative outcomes after disclosure. Our results correlate well with many studies (14, 19, 21, 23, 24), which announce positive outcomes to be more common than negative outcomes. In our study positive outcomes were not specified, but examples mentioned in other studies are increased support, strengthening of relationship, decreased anxiety, reduced risk behavior and partner testing. In Ethiopia (20), more than 50% reported negative outcomes from partner. However this is the only study reporting such high percentage of negative outcomes. Even though many women in our study were afraid of negative outcomes, only a few women experienced this.

In the future, we hope for a further increase in the number of positive outcomes as well as a reduction in concerns prior to disclosure.

5.2 Limitations

This study was conducted in two health centers in Moshi with a limited number of patients and therefore the results cannot be generalized to the entire Tanzania. Also it was conducted in the urban districts of Moshi and the results can probably not represent any rural area. The

collection of data to our study started in 2005 and data from that time may not be representative for today's situation.

All of the questions in the questionnaires are in Swahili with partly English translation. Also all written answers and answering alternatives are in Swahili. Handwritten answers were sometimes hard to interpret. Different local people (mostly health personnel at the health centers) helped us to translate from Swahili to English, but it was a great language barrier since only a few of them had good English skills. Asking multiple people about translation led to many different answers.

Due to multiple interviewers with different interviewing-techniques and different ways of filling out the answers we sometimes had a hard time to interpret the data. But at the end we managed to translate all the words from Swahili to English and thanks to the dedicated personnel at the health centers we could ask many times, in order to get all the data correct.

The patients were followed from the antenatal enrolment to one year postnatal, with follow-ups at one, three, six and twelve months. Some women only appeared at the enrolment, some came to every follow-up and some came to a various number of follow-ups. How many questions in the enrolment/follow-ups that were answered differed a lot. If the women did not show up at the follow-up after twelve months, there was also a follow-up after 15-24 months that we used instead, if this questionnaire was filled out.

Some answers in the enrolment were unfilled due to the patient's lack of knowledge (for example partner's age or education).

Some of the data is inconsistent. Sometimes the same patient gave altered answers to the same question at the different follow-ups. For example one woman could say she had disclosed her HIV status to her husband at one follow-up, and then, at the next follow-up, she said she had not disclosed her status to anyone. Examples of other confusing answers were women first answering that they did not use contraception, but at the next answer, in the same questionnaire, they answered that they used condoms.

The questions differ between the follow-ups. This is not always favorable since we miss out on information that would be interesting to look at, for example that the experience of disclosure is requested in the three and six month's follow-ups, but not in the twelve month's follow-up.

5.3 Conclusion and recommendations

Tanzania is a developing country with a HIV prevalence (among people 15-49 years) of 5.1%. HIV is an important predictor for the health status in Tanzania.

In this study 246 HIV positive women in Moshi, Tanzania were interviewed about HIV disclosure.

The disclosure prevalence was 78.0%. This is fairly high, but can hopefully become even higher with improved education and knowledge about all the benefits that follow disclosure.

More than 80% of the women who disclosed their HIV status chose to tell their partners. We have found a similar high disclosure rate to partners in several studies. We can therefore assume that the partner is the most preferred person to disclose to. Strategies to increase couple counseling should be strengthened or improved since women prefer to involve their partners in coping with HIV.

Although statistical analysis of our data found some significant differences in disclosure rates between women with different socio-economic background (employment, marital status and age of partner), the number of cases in our study is probably too small to make any general conclusions. Nevertheless, steady relationship has been stated to positively influence disclosure in several comparable studies.

The fact that our women thought that acceptance was the most common attitude towards HIV positive people is uplifting. Another promising finding was that even though some women reported concerns about HIV disclosure, a minority actually had had negative experiences after disclosure. This finding is consistent with the already existing literature, and hopefully this tendency of mainly positive experiences will continue and increase even more in the future.

Among the women in our study we found some outstanding socio-demographic data. The fact that almost 90% had no employment, more than 50% had an income below the poverty line and almost 85% had either no education or only primary school education is noteworthy. These circumstances are important to keep in mind when fighting HIV. Free or low cost services and treatment, better education around HIV and a safe and encouraging health system

are important keys. These strategies will hopefully help increasing disclosure rates and adherence to treatment as well as reducing HIV transmission.

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7 Appendixes

The following attachments contain the questionnaires used in the research program: enrolment and follow-ups after one, three, six and twelve months.

Questionnaire - Female

- Respondent identification number:.....
- Gravida (Hii ni mimba ya ngapi?)
- Matatizo katika ujauzito huu?
- L.M.P (Tarehe ya mwisho ya kuona siku).....
- Mahali anapotaka kuzalia.....
- Jina la anayedodosa
- Clinic.....
- Namba ya watoto waliohai.....
- 0.Hapana 1.Ndiyo
- Umri wa mimba.....
- Miaka aliyoshi Moshi.....
- Tarehe
1. Je una umri gani? _____ miaka
2. Dini 0.Sina 1. Mkristu 2.Mwislamu 3. Dini ya asili
3. Je umeajiriwa na unapokea mshahara mwisho wa mwezi 0.Hapana 1.Ndiyo (Kazi _____)
4. Kama hujajiriwa, unafanya shughuli gani inayokupatia kipato? (Taja _____)
5. Kwa kukadiria kipato chako cha mwezi ni kiasi gani?
- 0.Sina 1.< 30,000 Tanzanian shs 2.30,000-59,000 Tanzanian shs
- 3.60,000-100,000 Tanzanian shs 4.>100,000 Tanzanian shs
6. Kiwango cha elimu uliyofikia-andika namba ya miaka aliyomaliza
- 0.Sikuwahi kusoma 1. (Primary level) Darasa la 1 - 7
2. (O level) Kidato 1-4 3. ('A' level) Kidato cha 5-6
- 4.Higher institutions (Degree, advanced diploma) Elimu ya juu
7. Hali yako ya unyumba kwa sasa ikoje?
- 1.Nimeolewa (Ni bwana wa wangapi? _____) → 8
2. Tunaishi pamoja bila ndoa (Ni bwana wa wangapi? _____) → 8
3. Sijaolewa → 9
4. Tunetengana (kwa miaka _____) /Mjane (kwa miaka _____) → 9
8. Je mmeishi pamoja kwa muda gani? Kwa miaka _____ → 10
9. Kana hujaolewa, ametengana, au mjane je una mwenzi wa kila siku?
- 0.Hapana → 13 1.Ndiyo → 8,10
10. Je umeolewa au unaishi na mume mwenye wake wengi? 0.Hapana 1.Ndiyo (Namba ya wake _____)
11. Je mume/mwenzi wako ana wanawake wengine nje ya ndoa?
- 0.Hapana 1.Ndiyo 2. Sijui
12. Kama umeolewa/ kuishi pamoja je wewe na mume/mwenzi wako mnaishije?
- 1.Pamoja wakati wote 2.Ananitembelea (mara _____ kwa wiki)
3. Tunaishi mbali mbali kwa zaidi ya miezi sita 4.Nyingine (Taja _____)
13. Je umeshakuwa na mwenzi/wapenzi wengine kabla ya huyu baba aliyekupa ujauzito wa sasa?
- 0.Hapana 1.Ndiyo (Wangapi _____)
14. Ulikuwa na umri gani ulipooewa kwa mara ya kwanza? Miaka _____
15. Je umeshawahi kulazimishawa kufanya mapenzi kwa nguvu bila idhini yako au kubakwa?
- 0.Hapana 1 Ndiyo (na nani _____)
16. Je unakunywa pombe?
- 0.No Hapana 1.Ndiyo (Kila siku /Mara moja kwa wiki/Mara moja moja)

42. Ulikuwa na umri gani ulipokutana kimwili mara ya kwanza? Miaka _____
43. Je ulitaka kufanya kitendo hicho au ulilazimishwa?
0. Hapana, sikutaka nililazimishwa 1. Ndiyo, nilitaka
44. Je ulitumia kondomu ulipokutana kimwili kwa mara ya kwanza? 0. Hapana 1. Ndiyo
45. Je ni watu wangapi tofauti ambao umekutana nao kimwili kwa kipindi cha miezi 12 iliyopita
ukiacha mwenzi/mume wako?
0. Hakuna sijakutana na mwingine 1. Ndiyo, idadi _____
46. Je kwa ujumla ukimweka na mume/mwenzi wako wa kila siku, umeshakuwa na wenzi /wapenzi wangapi tangu ulipokutana kimwili kwa mara ya kwanza hadi sasa? Idadi _____
47. Je umewahi kutumia kondomu/mpira wa kuuwisha uume wakati wa kukutana kimwili?
0. No Hapana 1. Yes Ndiyo
48. Je ulikuwa na umri gani ulipopata ujauzito kwa mara ya kwanza? Miaka _____
49. Una jumla ya watoto wangapi walio hai? _____ (Kama mimba ya kwanza → 57)
- Umeshawahi kupata ujauzito ambao**
- | | No | Yes | No of times |
|---|----|-----|--------------------------------|
| 50. Mimba ilitoka yenyewe / kuharibika (abortion) | 0 | 1 | _____ (Ilitoka na miezi _____) |
| 51. Mtoto alizaliwa amekufa (stillbirth) | 0 | 1 | _____ |
- Umeshawahi kuzaa mtoto ambaye**
- | | | | |
|---|---|---|-------|
| 52. A premature baby Amezaliwa kabla ya siku/njiti | 0 | 1 | _____ |
| 53. Below 2500 grams at birth Aliyekuwa na uzito wa gramu 2500 au chini? | 0 | 1 | _____ |
| 54. Alikuwa mtoto hai, lakini akafariki kabla ya kufikia umri wa mwaka mmoja? | 0 | 1 | _____ |
55. Urari wa mtoto wa mwisho Miaka _____
56. Je watoto wako wote wana baba mmoja? 0. Hapana 1. Ndiyo
57. Je umeshawahi kutumia njia yoyote ya uzazi wa majira/mpango?
0. No Hapana 1. Ndiyo (Taja _____)
58. Mimba hii ulitaka au uliipata kwa bahati mbaya?
0. Hapana ilikuwa bahati mbaya 1. Ndiyo nilitaka
59. Je huko majumbani, i watu wenye ndugu wenye ukimwi wanaishije nao? _____
60. Je tukikupima na kukuta na UKIMWI, ungependa kushirikiana majibu yako na nani? _____
(Kama mwenzi hakutajwa nenda swali la 61)
61. Kama mume/mwenzi hakutajwa, je tukikupima na kukuta na ukimwi utaweza kumwambia/kumjulisha? 0. Hapana 1. Ndiyo
- b). Kama hapana, kwanini? (Zungushia zote anazotaja)
1. Naogopa ataniambia ni mimi nimeleta ugonjwa katika ndoa
 2. Naogopa anaweza akanipiga au kunitukana
 3. Naogopa ataniambia
 4. Naogopa atawaambia ndugu zake
 5. Sababu nyinginezo, taja _____
- c) Kama hutamjulisha itakuwaje kuhusu suala la kukutana kimwili? _____
62. Umeshawahi kupima ukimwi au hii ni mara ya kwanza? 1. Mara ya kwanza 2. Nimeshapima

FOMU YA MAMA

MWEZI WA TATU BAADA YA KUJIFUNGUA

Date _____

ID Number _____

1. Have you resumed your menses? *Je umeshaanza kutumika tangu ujifungue?*
 0.No *Hapana* 1.Yes *Ndiyo (tangu mwezi wa _____ baada ya kujifungua)*
2. Have you resumed sex *Je umeshaanza kukutana kimwili na mume/mwenzi wako?*
 0.No *Hapana* →4 1.Yes *Ndiyo (tangu mwezi wa _____ baada ya kujifungua)* →3,4
3. If yes are you using any contraceptive method? *Kama ndiyo, unatumia njia yoyote ya kujikinga usipate mimba?*
 0.No *Hapana* 1.Yes *Ndiyo (Itaje _____)*
4. Are you planning to have more babies? *Je bado unataka kupata watoto wengine baada ya huyu wa sasa?*
 0.No *Hapana* 1.Yes *Ndiyo (Huyu wa sasa akiwa na miaka _____)*
5. Are you breastfeeding the infant? *Unamyonyesha mtoto?*
 0.No *Hapana* 1.Yes *Ndiyo*
6. Have you informed anybody about your HIV test results? *Je umeshamueleza mtu yeyote kuhusu majibu yako ya kipimo cha ukimwi?*
 0.No *Sijamwambia mtu*→10 1.Partner *Nimemwambia mume au mwenzi wangu*→7
 2.My mother *Mama yangu*→7 3.My friend *Nimemwambia rafiki yangu*→7
 4.Other specify *Mwingine, mtaje _____* →7
7. How long did you take to inform him/them? *Je ulichukua muda gani tangu upimwe hadi ulipomueleza/waeleza?*
 Weeks/Months *Wiki/Miezi _____ tangu kupimwa* →8,9
8. Did you experience any of the following when you informed your partner about the results? *Je mume/mwenzi alifanyaje ulipomueleza majibu yako?*
 0.Hakufanya kitu
 1.Alikasirika sababu umeamua kupima 2.Alikugombeza/kuleta ugonvi
 3.Alikupiga 4.Amekuacha sababu ya kupima
 5.Nyinginezo _____
9. Has your partner come for testing? *Je mume/mwenzi wako naye ameshakuja kupima?* →11
 0.No *Hapana* 1.Yes *Ndiyo*
10. Why haven't you told anybody? *Kwanini hujamueleza mtu yeyote?* _____ →11
11. Have you experienced any of these breast problems since the last visit, including currently? *Je umeshapata matatizo haya ya maziwa tangu ulipohudhuria kliniki mara ya mwisho?*
- | | | |
|---|---|---|
| 1. Cracked nipples <i>Chuchu kupata mipasuko na kuuma mtoto anaponyonya</i> | 0 | 1 |
| 2. Bleeding from the nipples <i>Kutoka damu kwenye chuchu</i> | 0 | 1 |
| 3. Pain due to engorged breasts <i>Maumivu kwa ajili ya titi kuvimba</i> | 0 | 1 |
| 4. Breast abscess <i>Jipu la kwenye titi</i> | 0 | 1 |
12. Do you presently have the following symptoms? *Je kwa sasa una dalili zifuatazo?*
 1. Abnormal vaginal discharge *Kutoka ute usio wa kawaida ukeni-unanuka, rangi njano n.k*

FOMU YA MAMA

MWEZI WA SITA (6) BAADA YA KUJIFUNGUA

Date _____

ID Number _____

1. Have you resumed your menses? *Je umeshaanza kupata siku zako?*
 0.No *Hapana* 1.Yes *Ndiyo (tangu mwezi wa _____ baada ya kujifungua)*
2. Have you resumed sex *Je umeshaanza kukutana kimwili?*
 0.No *Hapana →4* 1.Yes *Ndiyo (tangu mwezi wa _____ baada ya kujifungua) →3,4*
3. If yes are you using any contraceptive method? *Kama ndiyo, unatumia njia yoyote ya kujikinga usipate mimba?*
 0.No *Hapana* 1.Yes *Ndiyo (Itaje _____)*
4. Are you using condoms? *Je mnatumia kondomu wakati mnapokutana kimwili?*
 0.No *Hapana* 1.Yes *Ndiyo*
5. Are you breastfeeding the infant? *Unamyonyesha mtoto?*
 0.No *Hapana* 1.Yes *Ndiyo*
6. Have you informed anybody about your HIV test results? *(ANGALIA FOMU YA MWEZI WA TATU ALIVYOJIBU) Je mpaka sasa umeshamueleza mtu yeyote kuhusu majibu yako ya kipimo cha ukimwi?*
 0.No *Sijanwambia mtu →10* 1.Partner *Nimemwambia mume au mwenzi wangu →7*
 2.My mother *Mama yangu →7* 3.My friend *Nimemwambia rafiki yangu →7*
 4.Other specify *Mwingine, mtaje _____ →7*
7. How long did you take to inform him/them? *Je ulichukua muda gani tangu upimwe hadi ulipomueleza/waeleza?* _____ *→ 8,9*
8. Did you experience any of the following when you informed your partner about the results? *Je mume/mwenzi alifanyaje ulipomueleza majibu yako?*
 0.Hakufanya kitu
 1.Alikasirika sababu umeamua kupima 2.Alikugombeza/kuleta ugomvi
 3.Alikupiga 4.Amekuacha sababu ya kupima
 5.Nyinginezo _____
9. Has your partner come for testing? *Je mume/mwenzi wako naye ameshakuja kupima? →11*
 0.No *Hapana* 1.Yes *Ndiyo*
10. Why haven't you told anybody? *Kwanini hujamueleza mtu yeyote?* _____ *→11*
11. Have you experienced any of these breast problems since the last visit, including currently? *Je umeshapata matatizo haya ya maziwa tangu ulipohudhuria kliniki mara ya mwisho?*

| | | | |
|---------------------------------|--|---|---|
| 1. Cracked nipples | <i>Chuchu kupata mipasuko na kuuma mtoto anaponyonya</i> | 0 | 1 |
| 2. Bleeding from the nipples | <i>Kutoka damu kwenye chuchu</i> | 0 | 1 |
| 3. Pain due to engorged breasts | <i>Maumivu kwa ajili ya titi kuvimba</i> | 0 | 1 |
| 4. Breast abscess | <i>Jipu la kwenye titi</i> | 0 | 1 |

FOMU YA MAMA**MWEZI WA (12) BAADA YA KUJIFUNGUA**

Date _____

ID Number _____

1. Have you resumed your menses? *Je umeshaanza kupata siku zako?*
 0.No *Hapana* 1.Yes *Ndiyo (tangu mwezi wa _____ baada ya kujifungua)*
2. Have you resumed sex *Je umeshaanza kukutana kimwili?*
 0.No *Hapana* 1.Yes *Ndiyo*
3. Are you using any contraceptive method? *Je unatumia njia yoyote ya kujikinga usipate mimba?*
 0.No *Hapana* 1.Yes *Ndiyo (Itaje _____)*
4. Are you using condoms? *Je mnatumia kondomu wakati mnapokutana kimwili?*
 0.No *Hapana* 1.Yes *Ndiyo*
5. Are you breastfeeding the infant? *Unamyonyesha mtoto?*
 0.No *Hapana* 1.Yes *Ndiyo*
6. Have you shared your HIV results with your partner? *Je mpaka sasa umeshashirikiana majibu yako ya kipimo cha ukimwi na mume au mwenzi?*
 0.No *Hapana* 1.Yes *Ndiyo*
7. Apart from the partner have you discussed your HIV results with anybody else? *Je zaidi ya mume/mwenzi umejadiliana majibu yako ya kipimo cha UKIMWI na mtu mwingine yeyote?*
 0.No *Hapana* 1.Yes *Ndiyo (Mtaje _____)*
8. Has your partner come for testing? *Je mume/mwenzi wako naye ameshakuja kupima?*
 0.No *Hapana* 1.Yes *Ndiyo*
9. Still living with the husband/father of the child *Je bado unaishi na baba wa mtoto wako au mtengana baada ya kujifungua?*
 1. *Tunaishi pamoja* 2. *Tumetengana (Mwezi _____ baada ya kujifungua)*
10. Do you presently have the following symptoms? *Je kwa sasa una dalili zifuatazo?*
- | | | | |
|-------------------------------|--|---|---|
| 1. Abnormal vaginal discharge | <i>Kutoka ute usio wa kawaida ukeni-unanuka, rangi njano n.k 0 1</i> | | |
| 2. Genital itching | <i>Kuwashwa sehemu za siri</i> | 0 | 1 |
| 3. Genital ulcers | <i>Vidonda sehemu za siri</i> | 0 | 1 |
| 4. Dysuria | <i>Maumivu wakati wa kwenda kukujoa</i> | 0 | 1 |
| 5. Dyspareunia | <i>Maumivu wakati wa kufanya mapenzi</i> | 0 | 1 |
11. Have you been hospitalised for medical illness since the last visit? *Je umeshalazwa hospitalini tangu ulipokuja kliniki kwa mara ya mwisho?*
 0.No *Hapana* 1.Yes *Ndiyo (Tatizo _____)*
12. Any other problem *Je mama ana tatizo lingine lolote kuhusiana na afya yake? Litaje _____*

KAMA HAJAMLETA MUME/MWENZI KUJA KUPIMA MSHAURI AMLETE**PHYSICAL EXAMINATION**

1. Weight (kg) _____ Height _____ BP _____

Chukua damu ya mama kama haikuchukuliwa akiwa na miezi 9