

Research Article

Evaluating Factors Influencing the High Uptake of HIV Testing and Counselling, among Pregnant Women Attending the Antenatal Clinics in Maseru Lesotho

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Abstract

Background: HIV testing services is one of the key policy responses to the HIV/AIDS epidemic in the country Lesotho, principally as a primary prevention strategy and as an entry point to other HIV/AIDS related services. The disease is a major challenge in the country with a prevalence of 23.8% to 25% in 2019. HIV Testing Service has been well utilized among pregnant women obtaining services at these health facilities.

Objective: The aim of this study is to evaluate and determine the various factors influencing the high uptake of HIV testing among pregnant women attending these facilities.

Methods: An observational cross-sectional study design was used and data collected using a structured questionnaire administered in face-to-face interviews. The sample consists of 271 pregnant women aged between 15 and 49 years.

Results: The uptake of HIV testing and counselling was found to be high, as evidence by the following finding: high awareness of HIV transmission, HTS service availability, education and the need to protect their unborn child were other noted factors. Participants also identified stigma, fear of discrimination and rejection from families and community members as factors that would prevent them from undergoing voluntary counselling and testing. Mother's knowledge of HIV transmission from person to person was good except in the 21 to 30 year's group who had statistically significantly worse knowledge of HIV transmission ($p < 0.001$).

Conclusion: A high knowledge and understanding of HIV testing services contribute in no small way to its high uptake, while issues surrounding stigma, discrimination and rejection from families and community members were non supporting factors.

Recommendation: includes continuing development and raising awareness in the community with the active participation of the partner, and other family member should be encouraged. The collaboration of the partner and the strong influence of mother-in-law's in developing country should be critically examined.

Keywords: Pregnant; HTS; Women; HIV/AIDS; PMTCT

Introduction

According to the most recent United Nations Programme on HIV and AIDS (UNAIDS) report, there were an estimated 36.9 million people living with HIV, of which about 35.1 million [29.6 million to 41.7 million] adults, and 1.8 million of whom were children less than 5 years of age. 1.8 million [1.4 million to 2.4 million] people became newly infected with HIV in 2017 while 940,000 [670,000 to 1.3 million] people died from AIDS-related illnesses in 2017 with

about 35.4 million [25.0 million to 49.9 million] people have died from AIDS-related illnesses since the inception of the epidemic [1].

The Acquired Immunodeficiency Syndrome (AIDS) pandemic in sub-Saharan Africa accounts for three-quarters of the worldwide HIV burden [2]. Lesotho is one of the countries hardest hit by this pandemic, the second highest HIV incidence after Swaziland with an estimated prevalence of approximate 23.8% to 25% in 2019, and has been around this level since 2005 [1]. An estimated 320,000 people were living with HIV in Lesotho and 4,900 died from AIDS-related illnesses in 2017 [3].

Mother-to-child transmission is the most common mode of Human Immunodeficiency Virus (HIV) transmission among infected children, which is said to be a vertically transmitted from HIV positive pregnant woman to the unborn baby during pregnancy, labour and delivery or through breastfeeding. When the HIV test was developed in the mid-1980s, HTS tended to be accompanied by little counselling [3].

However, with the growing awareness of HIV infection and the recent availability of Antiretroviral Therapy (ART), the scope of and reasons for HIV Testing and Counselling have broadened. The Interventions to prevent transmission of HIV from mother-to-child

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have become increasingly available in Africa, but some women are still reluctant to participate. Refusal to be tested for HIV and non-receipt of HIV test results have been studied as barriers to the effectiveness of Prevention of Mother-to-Child Transmission (PMTCT) programme. Major progress in the last two years in expanding access to services all over the world in the prevention of mother-to-child transmission through HTS services suggests that this mode of transmission could be rendered extremely rare in the future with sufficient financing, commitment and strategic action [4]. HIV Testing and services (HTS) is the process by which an individual undergoes confidential counselling, to enable him or her arrive at an informed choice with respect of learning his or her HIV status and advice on taking the appropriate action. Counseling during the HTS, consists of pre-test, post-test and with a follow-up counselling. Pre-test counseling entail the counsellor given an individual (or a couple or group) the opportunity to explore and analyse their situation and consider being tested for HIV [5]. Each individual makes an informed decision regarding whether or not to undergo the HIV test after they have been provided with all relevant information to enable them understanding the nature of what this service entail [5].

The scientific nature of HTS is the client-centered nature of the services, whereby counselling encourages trust between the counselor and the client so that there is an opportunity for in-depth discussion of HIV/AIDS, and the mode of prevention is fully explored [6]. Post-test counselling, supports people in understanding their test result and its implications, whether the result is positive or negative, exploring whom they might share the test result with, and how to approach such a personal matter with others member of the families.

Follow-up counseling supports clients in coping with issues raised as a result of learning of their HIV status, and this is relevant for both HIV positive or negative result. For many years, little was known about preventing transmission of HIV infection from mother-to-child. Recently, however, many advances have been made in developing an effective and affordable interventions that reduces the likelihood that a woman will pass the virus during pregnancy, labour delivery and during breastfeeding [7]. HTS like other reproductive health services is a valuable entry point for the provision of counseling and voluntary testing to the wider community of healthy and asymptomatic women and their partners. Some reproductive health unit such as Sexually Transmitted Infection (STI) clinics, paediatric services and family planning clinics provide an opportunity to offer testing to potential mothers and fathers [8].

HTS services have been shown to contribute to an increase in safe sexual behaviour at the individual level, and are likely also to reduce the ignorance, fear and stigma associated with HIV infection in the population at large [9].

The antenatal clinic is one of the few places where health service providers routinely interact with pregnant women and their partners. It provides an important opportunity for women and their partners to receive health promotion information, counseling and testing with access to appropriate therapies. HIV infected woman is seen as a death sentence in some part of Africa and which result in the HTS acceptance rates in these countries being very low [10].

Statement of the Problem

Lesotho with a population of 2.2 million in 2018, of which 330,000 are living with HIV virus with approximately 190,000 (57.58%) of the infected are women [3]. It is therefore imperative to say that, without

proper HTS preventive interventions measures, approximately 30% to 45% of infants born to HIV-positive pregnant women will be infected the virus through vertical transmission [9].

Research question

What are the various factors influencing the high uptake of HIV testing services among pregnant women attending the ANC at the Queen Mamohato memorial hospital filter clinic Lesotho, compare with HIV negative mothers attending the same facilities in Lesotho?

Study hypothesis includes the following:

a) Mother's desire to protect her unborn baby from HIV is an important factor contributing towards the increased uptake of HTS among HIV positive mothers attending the antenatal clinic.

b) Mother's knowledge of her HIV status is an important contributor factor towards the increased uptake of HTS among HIV positive mothers attending the antenatal clinic.

What is known about factors affecting the uptake of Voluntary Counseling and Testing among clinic attendees in Lesotho?

A recent study in Lesotho explored differences in uptake between mobile clinic HTC and home-based HTC services. The study found that the success of different services depended on which groups they were aiming to reach. Mobile clinics were more effective at detecting new infections, while home-based HIV testing were able to reach more children and people who had never tested before [10].

HIV Testing and Counselling (HTC) services have been steadily expanding across the country, particularly at a community level [9]. In 2016, 72% of people living with HIV in Lesotho, had tested for HIV and were aware of their HIV status. Testing coverage is generally higher among women than in men, in 2014, 36.4% adult men and 58% of adult women (between the ages of 14 to 49) had taken an HIV test in the past 12 months and knew their results [11].

In 2014, Lesotho implemented provider-initiated testing and counselling, which is when service providers offer HTC rather than waiting for an individual to request it. However, this has been compromised by a lack of health personnel [12].

Some important benefit of pregnant women undergoing HTS (knowing their HIV status) includes the following:

1. The knowledge of a negative result in pregnancy can reinforce safer sex practices and help in empowering the pregnant woman to remain negative.
2. Knowing a woman's HIV status would allow counselling about infant feeding practices. HIV negative women will be encouraged to exclusively breastfeed and positive women would have options to minimize the risk of HIV transmission through breastfeeding.
3. Identifying HIV in pregnancy will enable women to access antiretroviral therapy to reduce mother to child transmission of HIV.
4. Knowledge of her HIV status may enable a woman to make informed choices about future pregnancies and future fertility.
5. A woman who knows she is HIV infected may seek early appropriate medical care for HIV related condition (e.g., tuberculosis) if she becomes ill.
6. A diagnosis of HIV in the mother allows appropriate diagnosis,

treatment and follow-up of her baby.

7. Women who have had an HIV test may be able to share their test results with their sexual partners. With increasing number of people being aware of their status through widespread counselling and testing, it can help to normalise HIV in the community.

How will the study help in improving the level of HTS among antenatal clinic attendees?

- The results would help in determining what other considerations will be essential in designing the program in order to improve the level of HTS for all pregnant women (100%) for both their benefit and that of the unborn child.
- This study will also assist in shedding more light on the negative views of few pregnant women have about the programme, which had contributed to their non-participation in the programme.
- Finally, the study will aid in reducing fear, ignorance and stigma surrounding HIV infection and may generate further questions requiring further research study.

Aim of this study

The study investigated factor influencing the increase uptake of HTS among pregnant women attending the Queen Mamohato filter clinics in Maseru and to provide the Ministry of Health with appropriate information that will help them in sustaining and improving the present level of services and to allocate resources efficiently.

Objectives

The objective of this study is divided into Primary and Secondary.

Primary objective

To assess factors influencing the increase uptake of HTS among pregnant women attending the ANC.

Secondary objectives includes

- Generating questions for further study.
- To provide the authorities and other organizations involves with HIV, with information about the importance of HTS among pregnant women.

Type of research

Institutional health systems research

Definitions of terms used in the study

- Mother-to-child transmission is the process by which infection of HIV from an HIV-positive mother to her child during pregnancy, labour, delivery and during breastfeeding.
- Tests used for the diagnosis of HIV infection in a particular person require a high degree of both sensitivity and specificity. In Lesotho, this is achieved using two rapid tests the Determine HIV 1&2 rapid reagent and Uni gold HIV 1&2 reagent parallel. This method determines the size of the antigens in the test kit binding to the antibodies; the two-test kits are highly accurate [13]. The third reagent use is the SD BIOLINE HIV-1/2 3.0 test use if there is any discrepancy between the other two tests above. SD BIOLINE HIV -1/2 is an immunochromatographic assay for the differential and qualitative detection of all isotypes (IgG, IgM, IgA)

antibodies specific to HIV-1 including subtype O and HIV-2 simultaneously, in human serum, plasma or whole blood [5].

- Pre-test counseling is the counseling given to an individual before an HIV test is performed to make sure that the individual has sufficient information to make an informed decision about having an HIV test.
- HTS and counseling is a process by which an individual undergoes counseling to enable them to make an informed decision about being tested for HIV, assess their personal risk for HIV and develop a risk reduction strategy.

Methods

Study setting

The study was carried out at the Queen Mamohato three filter clinics in located at various outskirts in Maseru, Lesotho. Queen Mamohato Memorial Hospital is a private public partnership with the government of Lesotho and Netcare South Africa the only referral hospital in the country located in Maseru. Maseru is an emerging modern metropolitan city the capital of Lesotho.

Study design

Observational cross-sectional study design.

Target population/method of selecting sample

The study population consisted of all pregnant women attending the maternal and child health centre of Queen Mamohato hospital filter clinics in Maseru. The sampling procedure were simply by serial recruitment of all eligible participants between 15 and 49 years of age, who were registered for antenatal clinic at the three facilities during the course of this research until the desired sample sized were obtained.

Size of sample

The minimum sample size was obtained using the formula:

$$n = \frac{z^2 p(1-p)}{e^2}$$

Where,

z = value of standard deviation = 1.96 at 95% confidence interval

p = prevalence value of knowledge in Maseru Lesotho = 84% [14]

e = tolerable sampling error = 5%

n = sample size

$$n = \frac{1.96^2 \times 0.84 (0.2)}{0.05^2} = 258.52 = 258 \pm 10\% \text{ (A Sample size of 271)}$$

$$n = 258.15 = 258$$

The final sample size of 271 was arrived at because an extra 10% of the sample was added to allow for incomplete or unreliable answers.

Internal validity: In order to ensure internal validity properly trained research assistants were used in the study to complete the questionnaires.

Selection bias: selection bias was reduced because all the women coming for antenatal and fully registered in all the facilities were given equal opportunity to participate in the study.

Information bias: The questionnaires were translated from

English to Sesotho and back to English for consistence and were made available in the two languages during data collection.

Pilot study

The pilot study was carried out at Mabote clinic; this is simply a model of the full research study, but on a smaller scale, and run for 2 days and on fewer subjects. It focuses on those aspects of the full study that are novel, untested, and complex. It helps the research assistants become familiar with the procedures in the protocol, and in estimating how many people are likely to be encountered per week, that are eligible for the study, and also provide the principal investigator in estimating the resource requirements for the study in preparing the main budget for the full study, and enable all the short comings encounter during the pilot study to be corrected.

Data collection tool/measurement instruments

The measurement instruments for the study were questionnaires consisting of closed-ended and multiple-choice questions administered by field workers covering the following sections:

a) General Part-Socio demographic characteristics. b) Knowledge of Human Immunodeficiency (HIV) and its transmission (Knowledge and subjective risk perception). c) Attitude towards HIV testing. d) Knowledge and attitude to PMTCT

Statistical processes

Descriptive/analytic statistics: Descriptive data processing in this study entails categorizing, ordering, manipulating and summarizing the data and describing them in meaningful terms.

Data quality control and cleaning was commenced in the field by the researcher ensuring that all the information on the questionnaires had been properly collected, recorded and checked for completeness. Closed-ended questions were analysed using nominal scales into mutually exclusive categories and frequencies. Open-ended questions were analysed using post-coding prior to entering data and actual descriptive aspect was included in the report to provide context. Analysis also involves the production and interpretation of frequencies counts, tables and graphs that describe and summarise the data.

Ethical considerations

The Research project was registered with the Queen Mamohato ethic review board, in which the research protocol and consent form were approved.

Permission to conduct the study was granted from the main hospital with the full consent of the management team of all the three clinics, the purpose of this collaboration is to ensure that each unit retains a clear picture of the study.

The aim and objective of the study was explained to all the potential participants before data collection commence in addition the permission to include them in the study was also sought and written consent obtained. It was also clarifying that the participant were free to withdraw at any time without giving reasons, meaning that a decision not to participate was strictly respected and non-participation would not affect their health care at any of the facilities. Strict confidentiality of the data was maintained at all times and the data collection was conducted in a culturally sensitive way that no harm was caused to the participants. All information concerning individual subjects remained anonymous and kept confidential.

Study period/time lines

The study was completed within a period of 2nd of May to 5th July 2019.

Results

The socio-demographic profile

The socio demographic of the study participants obtain is as follow: a total of 271 pregnant women were included in the study, most of the participants (158, 58%) of the study were between 21 and 30 years of age, while majority (250, 92%) were married (Table 1).

The mean age of the mother's was 26.5 years, which was not statistically significant ($p= 0.07$) when compare to that of their partners (28.5 years) and (260, 96%) of the participants were Christian. Distance from the home to clinic and the cost of transport was recorded as a measure of accessibility by the participants to the HTS services. Most of the mothers (200, 74%) travelled between 5 km and 10 km from home to the hospital. More than half of the respondents (150, 55%) incur more than 4 Rand (USD 0.5) for transport costs for the trip (Table 1).

Education wise more than half of the mothers (145, 54%) had completed secondary school, while only (66, 24%) of the partner had achieved a similar level and this was statistically significant ($p<0.01$). More of the partners (154, 57%) compared with the mothers (98, 36%) were employed and this was statistically significant ($p<0.02$). More of the partners (201, 74%) were between 21 and 30 years of age, (Table 1).

The majority of the participants (188, 69%) came for their first antenatal visit in the second trimester of pregnancy (Figure 1).

Knowledge about HIV and HTS among the participant

More than half of the respondents (200, 74%) have heard of HTS from more than one source, but most received their information from health institution and the non-governmental organizations (190, 80%) and (160, 59%) respectively, while the radio (140, 51%) and television (70, 25%) served as the next most common source of information about HTS for HIV (Table 2). The two most important source of information per PMTCT were obtained at health facilities

Table 1: Mothers age, marital status and religions of pregnant women attending antenatal care at the Queen Mamohato filter clinics Maseru, 2019.

Demographic profile	n	%		n	%
Mothers age in years			Marital status		
15 - 20	49	18	Married	250	92
21 - 30	157	58	Single	19	7
31 - 40	62	23	Divorced	0	0
41 - 49+	3	1	Separated	2	1
Religion			Partner age in years		
Christian	260	96	15 - 20	0	0
Muslim	0	0	21 - 30	201	74
Traditional	7	3	31 - 40	59	22
Others	4	1	41 - 49	11	4
Mother Educational Status			Partner Educational Status		
None	3	1	None	14	5
Primary school	100	37	Primary school	175	65
Secondary school	145	54	Secondary school	66	24
Higher than secondary	23	8	Higher than secondary	11	4
Unknown	0	0	Unknown	5	2
Employment status in women			Employment status of partners		
Employed	98	36	Employed	154	57
Unemployed	173	74	Unemployed	117	43

visit and NGO with the following respective value of (160, 59%) and (140, 51%).

Nearly all the respondents were aware of the range of HTS services offered at the clinics, (260, 96%) were aware of pre-test counselling and 261 (96%) knew about HIV Testing. Slightly more than half of the participants (145, 54%) were aware that antiretroviral therapy availability at various health care facilities (Table 3).

The majority of respondents (240, 89%) knew that HIV was transmissible from person-to-person while, (260, 96%) identified

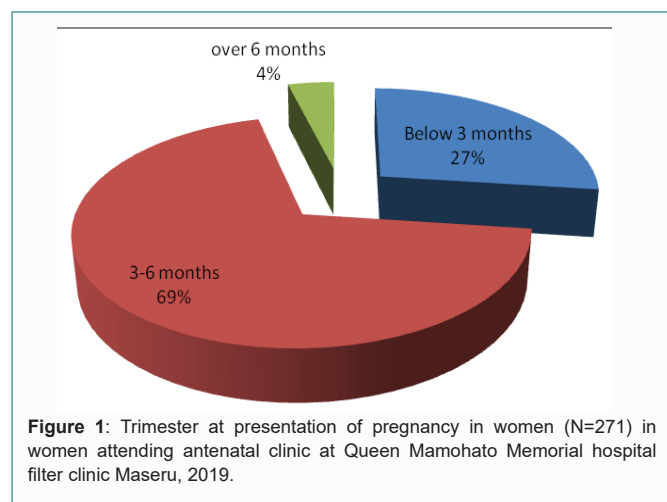


Figure 1: Trimester at presentation of pregnancy in women (N=271) in women attending antenatal clinic at Queen Mamohato Memorial hospital filter clinic Maseru, 2019.

Table 2: Source of information about HTS and PMTCT identified among pregnant women attending antenatal care at the Queen Mamohato filter clinics Maseru, 2019.

Number of sources of HTS					
No of sources	N	%	Sources	N	%
Yes ≥2	200	74	Two	150	75
No ≤1	71	26	Three	20	10
Total	271	100	Four	11	5
			Total	200	100
Source of information on HTS	N	%	Source of information on PMTCT	N	%
Hospital / workers	200	74	Hospital / workers	160	59
NGO	160	59	NGOs	140	51
Radio	140	51	Radio	40	14
Television	70	25	Television	20	7
Family member	50	18	Family Member	15	5
Pamphlet/poster	45	16	Pamphlet/poster	11	4
Friend	32	12	Friend	10	3.6
Don't know	10	4	Don't know	5	2
Newspaper/ magazine	5	2	Newspaper/magazine	3	1

more than one response and allowed to name sources

Table 3: Knowledge about HTS services identified in women (N=271) attending antenatal clinic at Queen Mamohato filter clinics Maseru, 2019. (Cont)

Variables	YES	NO	Don't know
	(N, %)	N	N
Awareness about HIV test	(270, 99.6%)	1	0
Mother ever tested for HIV	(240, 89%)	30	1
Perceived susceptibility to HIV Infection.	(200, 74%)	45	26
Willingness to take the HIV test	(250, 92%)	21	0
View on the importance of HIV test.	(249, 92%)	16	6
Partner ever been tested for HIV	(190, 70%)	60	21
Method and knowledge of HIV prevention	(259, 95%)	12	0
Knowledge about drug prevention	(270, 99.6%)	1	0

the risk of contracting HIV by the baby as being associated with vertical transmission from mother-to-child. Two hundred and eight (208, 77%) identified sexual transmission as the next most common source, (90, 33%) of the participants mentioned some other methods of HIV transmission, the majority of respondents (250, 92%) knew of two ways preventing HIV infection, while (269, 99%) participants identified the use of condom, (100, 37%) of the participants mentioned abstinence as another way of protection against HIV infection. The majority of participants (260, 96%) were aware that HIV infection can be transmitted to the baby during breastfeeding and while only (150, 55%) of the participant understood the process vertical transmission during delivery.

Attitude and perception towards HIV testing

This section highlights the attitude towards HIV testing.

All except one of the respondents (270, 100%) knew that there was a test for HIV and (240, 89%) had previously been tested for HIV. The majority (200, 74%) of the respondents believed that they may indeed be at high risk of being infected with HIV.

While (250, 92%) of the mothers expressed a willingness to undertake an HIV test in their current pregnancy. The reasons given for not wanting to be tested include the fear of stigmatization, discrimination by family and community, the lack of trust in providing an efficient confidentiality, and other underlying concern that was given include the possibility of losing their jobs and friends. The majority of the respondents (249, 92%) felt that it was important for a pregnant woman to undertake the HIV test.

If tested positive, most women (240, 88%) agreed that they would inform their partner/spouse while only (10, 2%) of the women surveyed said they would not tell anyone about their HIV positive test result. About two third of the respondents (190, 70%) claimed that their partner had been tested on a previous occasion. The majority of the participants (259, 95%) were aware of the existence and availability of drugs to prevent mother-to-child transmission of the virus.

Counselling session: This section describes the quality of counselling services with the following variables: education by counsellor; confidentiality; nature of counsellor; privacy during counselling and duration of counselling.

It is evident that the respondents were aware of most of the key issues concerning HTS during pre-test counselling sessions with (269, 99%) of the participants understood what it means to take an HIV test and (200, 74%) understood that it is a measure of prevention against contracting HIV. The majority of the respondents understood pre-test counselling (261, 96%), A majority, (240, 89%) agreed that they received explanation about the test's confidentiality and stressed the importance of keeping their HIV status confidential and could only trust or confide in a few selected people, as disclosure issues were closely associated with the risk of being stigmatized.

Most of the respondents (250, 92%) preferred female counsellor, while 240 (89%) indicated they would prefer an individual older than themselves.

Half of the participants (140, 52%) indicated that they were satisfied with the counselling services rendered compared to (120, 44%) thereof, who were very satisfied and few (7, 3%) were unsatisfied with respect to issues concerning privacy.

From the open question in the study the reasons for most of the

participant decisions to allow being tested include wanting to know their HIV status and the desire to be on ARV drugs, if found to be HIV positive. The mother's awareness of HTS and her age was investigated 65% of mothers between the age of 15 and 20 years had the knowledge about HTS. Those between the age of 31 and 40 had the highest level of knowledge about HTS. The difference between the groups was not statistically significant ($p=0.84$).

Mother's knowledge of HIV transmission from person to person was good except in the 21-30 year's group who had statistically significantly worse knowledge of HIV transmission ($p<0.001$). Mother's knowledge of HIV transmission from person to person was good except in the 21-30 year's group who had statistically significantly worse knowledge of HIV transmission ($p<0.001$). Mother's knowledge of prevention against HIV and her age was compared and revealed that 89% of mothers between 21 and 30 years had the worst level of understanding of HIV prevention. There is no statistically significant association between knowledge of prevention against HIV by age ($p=0.52$). The mother's willingness to undergo HIV testing differed very little by education and was not statistically significant ($p=0.05$) as outlined in (Table 4).

Discussion

UNAIDS asserted that, HTS constitutes the best means, whereby pregnant women can know their HIV status, but should be done with pre- and post- counselling, as this achieves more positive result than one that is not done with pre and post counselling [15-18]. From the study, it is imperative that the HIV status of the woman is known, and only then can proper implementation of PMTCT for the timely intervention be conducted for those who are HIV positive. This study found that the uptake of HTS in PMTCT by pregnant women was high (250, 92%) of the participants tested for HIV, the recent service improvements are simply ascribable to the following factors:

- PMTCT programme was rolled out to all public sector clinics in the district.
- Health workers and community counsellors were trained in HTS and PMTCT programme and posted to every clinic.
- Rapid testing availability in all the clinics, with health education and group counselling sessions, providing information on HIV and HTS in PMTCT.
- District PMTCT coordinators were appointed to provide support and conduct supervisory visits at clinics.
- In 2006, the government launched a five-year National AIDS Policy and Strategic Plan to combat HIV/AIDS. A "Know Your Status" campaign was also initiated with the declared goal of allowing for every person in Lesotho to undergo an HIV test and ascertain their status [19]. Demographic data 271 of the participant were between 15 and 49 years participated in this study.

Table 4: Some bivariate analysis computed include the following.

Variable	Mothers awareness of HTS by age		Knowledge about HIV transmission from person to person by age.		Knowledge of prevention against HIV by age.	
	N	Value	N	Value	N	Value
Age						
15-20	49	32	49	49	49	47
21-30	157	119	157	126	157	140
31-40	62	47	62	62	62	59
41-49	3	2	3	3	3	3
	P = 0.84		p< 0.001		p = 0.52	

The majority of the participants, (79, 53%), were in the age group of 21 to 31 years, while 15 to 20 year's constituted (62, 23%), (200, 75%) resided within the catchment areas of the clinics (distance of between 5 km to 10 km from the clinic). Such factors served as indicators that the HTS services are indeed available and accessible to these particular clients.

Knowledge and attitudes to HTS

The current study noted that a majority of participants (260, 96%) were aware of various methods of HIV transmission and protection. This is similar to a national survey carried out in Kenya where 95% women who attended ANC during their last pregnancy, of these, 93% accepted HIV testing and 98% of those tested received the test results [20].

From their perspective, the risk of contracting HIV/AIDS was viewed as being associated with both sexual transmission and from mother-to-child transmission. This accords the opinions expressed in the literature which indicated that "globally sexual transmission is responsible for 70% to 80% of all HIV transmission, blood transfusion 3% to 5%, injected drug user 5% to 10% and health care <0.01%.

The majority of the respondents (261, 96%) had prior knowledge of HIV and testing, but (280, 77%) of the participant knew that the virus could be transmitted through sexual intercourse, while other routes of transmission were not as well known. Such opinions concur with prior studies conducted in other developing countries where it was shown that there exists a general awareness of HIV [21]. Few participants (26, 17%) said they acquired information about protection and the importance of having an HIV test during group counselling for HIV transmission. The few declining the test expressed their fear of testing positive and not wanting to know their status as their behaviour is good, hence, "no need for the test", and the undercurrent fear of stigma and fear of surrounding knowledge thereof losing their loved ones/partners [22]. Such accurate awareness must be compared with a study in Ogun State, Nigeria, which revealed that only 27% of respondents understood the existence and detail of vertical transmission of HIV [23]. Almost, all the participants identified the use of condoms as a means of protection from HIV infection. Education from the media and the non-governmental organization can be said to have influence certain preventive behaviours such as condom use.

The percentage of participant who were willing to be tested (250, 92%) remained the same figure as those who felt it was essential for a pregnant woman to undergo the test. The main reasons articulated were concern for their protection of the baby and knowing the status of the mother to allow both the mother and the baby to receive appropriate care. These findings were supported by the findings of a study by Fernandez et al. that provider endorsement and perceived benefit of knowing HIV sero status to both the mother and child [24].

This study showed that the participants possessed sufficient knowledge of the range of HIV services available at the clinics including pre-test counselling, HIV testing, post-test counselling,

antiretroviral and further ongoing counselling. Such a finding accords with current local policies which are applicable. These specify that in the case of PMTCT programme, the undertaking of pre-test, post-test and ongoing counselling require being offered to all pregnant women, their partners and their families.

In the study, majority of the participants (120, 80%) reported as having being previously tested for HIV, they also consented to their being tested for HIV. It is a clear finding that previous HIV test history constituted a significant predictor of a willingness to test for HIV. The majority of the respondents (249, 92%) felt that it was important for a pregnant woman to undertake the HIV test. If tested positive, most of them agreed that they would inform their partner, spouse or religious leader in order of importance while others would inform a family member or friend. Very few (10, 28%) would not tell anyone about the HIV positive test result.

Literature mentioned that HTS may lead to certain behaviour changes, thus contributing to the further reduction of HIV transmission. HTS also opens the opportunity for infected individuals to access psychological support and care [25].

Fear of HIV/AIDS, possible discrimination by family and community and the lack of trust concerning confidentiality of results were some of the reason expressed by few participants in their refusal to undergo testing for HIV. At the XIV international AIDS Conference 2002, Nelson Mandela declared, "stigma, discrimination and ostracism are the real killers" [22].

The most common source of information regarding PMTCT and furthermore being specifically, mentioned by (160, 59%) of the participants, was derived from attendance at the clinic during previous visits. Another important source mentioned includes non-governmental organizations through awareness meetings on HIV in villages and schools organized by these organizations. As one participant explained, "I heard about this programme in the meeting conducted by Population Statistic International (PSI)".

Counselling and HTS

Counselling helps people to adhere to advice and treatment offers and provide couple with opportunity to plan for their future. In addition, it contributes to positive living and the acceptance of HIV results or status. In the current study, participants indicated that subjects discussed with the counsellor regarding HIV testing included prevention of HIV, taking an HIV test, the test results, that enable them enrol in a PMTCT programme and allow them undergo regular and frequent counselling section during the course of their pregnancy.

The majority of participants 98% indicated their understanding of pre-test counselling, 93% of this 98% were able to ask questions, understood the answers and were ensured of absolute confidentiality being explained to them.

The positive satisfactions indicated by the participant, with counsellors were probably because many health workers and community counsellors received training in a PMTCT programme in the past two years. These training, were ICAP facilitated in collaboration with the Elizabeth Glaser Paediatric AIDS Foundation, which addressed and identified challenges to the smooth implementation of Prevention of Mother-to-Child Transmission (PMTCT) of HIV services in 2007.

Such an outcome in turn believed to constitute one of the main factors in the high uptake of HTS in PMTCT discovered during the

study.

The majority of participants more than (240, 89%) indicated being happy and preferred to be attended by female or someone older than them. The study showed that the time allocated for pre-test and post-test counselling was reasonable because the majority of the participants (236,87%) spent between 30 to 60 minutes in the clinics.

Summarising the entire undertaking of the study yields the fact that the cornerstone of a successful PMTCT programme involves a high level of HTS uptake among pregnant women in order to appropriately identify those who are positive and at risk of transmitting the virus to their babies. Therefore, it remains important to understand reasons expressed by study participants for not undertaking the test.

Limitations

Pregnant women attending the Queen Mamohato three filter clinics in Maseru were included in the study, limiting the generalisability of the study to the rest of Lesotho or other countries. The maternal self-reporting method used in this study is a valid and reliable method of measuring knowledge and attitudes, as well as practices toward HTS particularly for short-term recall. The involvement of health workers as research assistants may also have contributed to participants providing more 'socially acceptable' responses, leading to an overestimation of the variable that cannot be confirmed.

Conclusion

This study found that the uptake of HTS by pregnant women was high one of the factors contributing to this was their knowledge regarding HIV transmission.

For the vast majority of pregnant women in Queen Mamohato Memorial hospital filter clinics, the support of a partner and/or key family member(s) is a very important factor in determining whether a woman in a favourable position to fully participate in HTS and benefit from PMTCT programme if found positive with the virus.

This study also revealed that it was easier to perform the test if it had already been undertaken on a prior occasion and the women involved prefer to inform their partner or spouse if they ascertained that they were HIV positive. It is important for the health services provider to note the preferred age of counsellor, being older and, in particular, the opportunity of having female counsellors who are of a more acceptable and understanding disposition towards the patients. Participants possessed a good knowledge of HIV transmission and protection and were aware about all the HTS available at the clinics of major significance, the study identified that the main factors influencing HTS uptake focused on potential fear of stigma, discrimination, rejection by families and community members and a serious anxiety regarding confidentiality. Protection of the baby and knowledge of the mother's status, cited reasons for the willingness displayed in the uptake of HTS among antenatal care clinics attendees at Queen Mamohato health care facilities.

The importance of confidentiality for HIV-infected women was clearly emphasis by the participant in the study, many of the participant experience difficulty in making the transition from accepting HTS and learning their HIV status to finding effective and culturally appropriate coping mechanisms within their families and communities. Sharing the diagnosis with the partner may not have the intended effect if there is little or no active participation by the partner and the entire family member.

Recommendations

More HTS centres should be set up for easy accessibility and strict confidentiality must, of necessity. A more conducive environment for mothers should be created by recruiting female, elderly and more understanding HIV/AIDS counsellors.

Confidentiality for HIV infected women must be considered in a society where there exists a serious stigma attached to people who have the virus. More media or radio talks should be aired, on a still greater frequency to educate families and community members on HIV or AIDS issues. It is recommended that HTS services be continuously developed and rolled out to all the clinics and community-focused sites so that appropriate awareness is raised about HIV, in order to address significant issues around stigma and discrimination.

The importance of community action and the full participation of the entire family members to reduce the stigma surrounding HIV or AIDS and to increase health promotion is factors which cannot be over emphasised.

Recommendation for further study

In order to increase acceptance of HTS, further research is needed, wherein crucial factors that affect the nature of women's actual decision making in different situations are examined, apart from the benefit for the baby, such as; collaboration of the partner and the strong influence of mother-in-law. Further work is required particularly around the issues of stigma and discrimination towards HIV positive persons and the necessity to promote culturally acceptable safe sex practices in our local environment.

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References

- UNAIDS/WHO. WHO fact sheet on HIV/AIDS. Geneva. 2018.
- Standton BF, LI X, Kahihuata J, Fitzgerald AM, Neumbo S, Kanduumbe G, et al. Increased protected sex and abstinence among Namibian youth following a HIV risk-reduction intervention: A randomised, longitudinal study. *AIDS*. 1998;12(18):2473-80.
- Government of lesotho. Guidelines to prevent mother to child transmission of HIV. 2016.
- Government of lesotho. National HIV and AIDS Policy. 2006.
- UNAIDS, Counselling and voluntary HIV testing for pregnant women in high HIV Prevalence countries - Elements and issues. Best Practice and collection 2001. 2018.
- UNAIDS Lesotho. Country Situation Analysis. 2007.
- UNAIDS. Reports on the global AIDS epidemic. 2008.
- Johnston LG, Sabin ML, Prybylski D, Sabin K, McFarland W, Baral S, et al. The importance of assessing self-reported HIV status in bio-behavioural surveys. *Bull World Health Organ*. 2016;94(8):605-12.
- Women's E-news, In Lesotho and Swaziland, AIDS Activates Women. 2005.
- Labhardt ND, Motlomelo M, Cerutti B, Pfeiffer K, Kamele M, Hobbins MA, et al. 'Home-Based Versus Mobile Clinic HIV Testing and Counseling in Rural Lesotho: A Cluster-Randomized Trial'. *PLoS Med*. 2014;11(12):e1001768.
- Revised national Monitoring and Evaluation (M&E) plan on HIV. National AIDS Commission .2016.
- Brown H, Vallabhaneni S, Solomon S, Mothi S, McGarvey S, Jackson T, et al. Attitudes towards prenatal HIV testing and treatment among pregnant women in southern India. *Int J STD AIDS*. 2001; 12:390-4.
- Models to routinely & actively offer HAART to eligible pregnant women (The Lesotho and Swaziland Experience). Tygerberg Children's Hospital. 2007.
- Kowalczyk J, Jolly P, Karita E, Nibarere JA, Vyanakondendera J, Salihi H. Voluntary Counselling and Testing for HIV Among Pregnant Women Presenting in Labour in Kigali, Rwanda. *J Acquir Immune Defic Syndr*. 2002;31(4):408-15.
- Counselling and voluntary HIV testing for pregnant women in high HIV Prevalence countries - Elements and issues, UNAIDS, Best Practice Collection. 2001.
- HIV/AIDS in Lesotho. ICAP. 2006.
- Muffih TH, Kayita J. 'Prevention of Mother-to-Child Transmission of HIV (PMTCT) Training Manual'. 2003.
- Voluntary Counselling and Testing (VCT). Joint United Nations Programme on HIV/AIDS (UNAIDS). 2000.
- Lesotho global AIDS response country progress report. Lesotho Ministry of Health. 2012.
- Sirengo M, Muthoni L, Kellogg TA, Kim AA, Katana A, Mwanyumba S, et al. Mother-to-child transmission of HIV in Kenya: results from a nationally representative study. *J Acquir immune defic syndr*. 2014;66(Suppl 1):S66-74.
- Ending AIDS: progress towards the 90-90-90 targets.
- Dauer B. XIV International AIDS Conference 2002: it's more than the M184V mutation. *HIV medicine*. 2002;3(4):227-8.
- Adeneye AK, Mafe MA, Adeneye AA, Salami KK, Brieger WR, Titiloye MA, et al. Knowledge and perception of HIV/AIDS among pregnant women attending antenatal clinics in Ogun State, Nigeria. *Afr J AIDS Res*. 2006;5(3):273-9.
- Fernandez M, Wilson T, Ethier K, Walter E, Gay L, Moore J. Acceptance of HIV testing during prenatal care. *Perinatal Guidelines Evaluation Project. Public Health Rep*. 2007;115(5):460-8.
- Joint United Nations Programme on HIV/AIDS (UNAIDS), Voluntary Counselling and Testing (VCT). 2000.