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# Knowledge, Attitude and practice towards condom utilization among patients enrolled on antiretroviral therapy: Case of Mokoni health centre, Northern Ethiopia

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**Abstract:** The burden of HIV/AIDS high in sub-Saharan countries which constitutes two third of globe and is worst in Ethiopia. Therefore identifying determinants of consistent condom use in HIV patients who are on ART had paramount importance in the prevention and control of the diseases. A little is known about the practice of condom use among HIV positive patients. The aimed of this study was to assess knowledge, attitude and practice towards condom utilization among people living with HIV/AIDS enrolled on ART in Mokoni town. An institutional based cross sectional study was conducted among ART users in Mokoni health center from June-august 2013. Data on the study variables was gathered using semi-structured questionnaire. After the subject was asked for their volunteer participation, then we collected data using interview. Descriptive statistics was used to determine the frequency and percentage of different variables. Data was presented in the form of tables and graphs. From the total study participants 177(56.73%) were females. Among 312 participants 35(11.22%) of them had knowledge about people on ARV can't transmit the HIV virus to un infected partners ,277(88.73%) knew even people taking ARV can transmit HIV to un infected partner .From the total 312 respondents 136(43.59%) had attitudes about people on ARV tend to engage in risky sexual practice ,176(56.41%) didn't believe people on ARV tend to engage in risky sexual practice. among the total respondents 121(38.78%) agreed that because of availability of ARV people could again engage in un protected sex, 64(20.51) agreed that it was safe to engage in unprotected sex with a person taking ARV. From 165 who were currently use Patterns of condom use among 165 who are using condom currently and 116(70.30%) were consistently used a condom. The majority of patients ART enrolled always use a condom during sexual intercourse. Significant numbers of the respondents were well confident about using condoms and attended session demonstrating about using condoms. Free and explicit discussion on safe sex and enhanced positive attitudes toward condom use should be encouraged.

**Keywords:** KAP, HIV, ART, Ethiopia

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## 1. Background

Human Immune deficiency Virus (HIV) infection is a serious public health problem. According to estimates from the World Health Organization (WHO), there are more than 36 million people are infected and 22 million had already died, and another 3.5 million became newly infected with HIV. Though the production of Antiretroviral Therapy (ART) started since 1990; it was universally recognized

that access to HIV/AIDS treatment and care till recently was highly inequitable (1). Globally every day 6800 persons became infected with HIV and over 5700 persons die from AIDS because of inadequate access to HIV prevention and treatment services (2).

The burden of HIV/AIDS is high in sub-Saharan countries which constitutes two third of the globe and is worst in Ethiopia. As strategy for prevention, condom use practice among others the most effective method against HIV infection. Therefore, identifying determinants of

consistent condom use in HIV patients who are on ART had paramount importance in the prevention and control of the disease (3). The risk of HIV transmission is dependent on individual ability to adhere to the medical regimen which affects both development of resistance to treatment drug and viral load. Additional crucial behavioral determinants of sexual transmission include inconsistent condom use, especially in combination with concurrent sexual partner (4).

AIDS has killed more than 25 million people since it was first recognized in 1981. Globally an estimated 39.5 million people were living with HIV and close to 4.3 million people were newly infected with the virus (5).

Sub-Saharan region bears 68% of global HIV burden. Reports on sexual behaviors of people on ART have been inconsistent; six studies in African and non African countries have shown that patients on ART are more likely engage in unprotected sex, however, other cross-sectional and longitudinal studies have reported a decrease in rate of risk sexual behavior after ART(6).

A growing number of HIV infected Ethiopians have gained access to ART so that by 2010; 246,347 Ethiopians in need of treatment were receiving ART. In Ethiopia it remains much to be done to understand why, when and what conditions people living with HIV/AIDS (PLWHA) practice risky sexual behavior. A little is known about the practice of condom use among HIV positive patients. Until recently the focus of HIV prevention efforts in most country including Ethiopia was largely on people uninfected with HIV and the sexual risky practice of HIV infected person didn't receive any serious attention(7). This study is, therefore, to assess the knowledge, attitude and practice of condom utilization on ART enrolled patients in Mokoni health center.

## 2. Methods and Materials

### 2.1. Study Design and Setting

An institutional based cross-sectional study was conducted among all PLWHA who are enrolled on ART in Mokoni health center. This study was conducted in Mokoni health center which is found in Mokoni town, southern zone of Tigray regional state at a distance of 661 km and 122 km from Addis Ababa and Mekelle respectively. The town has one health center, three private drug venders and three private clinics which provide health services to the community. In the health center there are 1110 ART enrolled patients. There are also 1084 pre-ART patients.

### 2.2. Population and Sampling

The study population includes all ART enrolled patients of the Mokoni health center, out of which 312 were included in this study. The sample size was calculated using single population proportion formula, with the assumptions  $P$ =prevalence of condom among sexually active respondents who are ART experienced ( $p=47.4\%$ ),  $d$ =

margin of error (5%), 95%CI. The study participants were selected using systematic random sampling from the total ART enrolled patients in Mokoni health center. The sampling interval was,  $R=1110/312=4$ , so that the first participant was selected randomly from the first four ART enrolled patients then every 4th participant was chosen until sample size attained.

### 2.3. Ethical Consideration

Ethical clearance was obtained from Mekelle University, college of health sciences. Permission also was asked from Mokoni health bureau and official letter was written and sent to Mokoni health center. The confidentiality and privacy of respondents was maintained by all data collectors. The willingness and non response right of participants was respected.

## 3. Results

### 3.1. Socio-Demographic Characteristics

**Table 1.** Socio-demographic characteristics of ART enrolled patients in Mokoni, Northern Ethiopia, 2013.

Variables	Frequency	Percentage (%)
Age		
15-24	55	17.7
25-34	114	36.6
35-44	104	33.4
>=54	39	12.3
Sex		
Male	135	43.3
Female	177	56.7
Religion		
Orthodox	249	79.8
Muslim	63	20.2
Educational status		
Illiterate	205	65.7
Primary	81	26
Secondary	21	6.7
college level and above	5	1.6
Occupational status		
Farmer	148	47.4
Merchant	44	14.1
Government employee	13	4.2
Private employee	25	8
House wife	17	5.5
Daily labourer	26	8.3
Student	9	2.8
Jobless	17	5.5
Commercial sex worker	13	4.2
Marital status		
Married	155	49.7
Single	50	16
Divorced	71	22.8
Widowed	36	11.5

A total of 312 people living with HIV enrolled in ART responded to the questionnaire making the response rate of

100%. From the total study participants 135(43.27%) were males and 177(56.73%) of them were females. Among the study participants majority of them were in the age interval of 25 -34 and 35-44 that makes each about 63(20.19%).out of the total of 312 respondents 249(79.81%) were orthodox and 63(20.19%) of them were Muslim

Of the total ART enrolled patients participated in this study, 205(65.70%) were illiterate, 81(25.96%) were primary level of education, 21(6.73%) were secondary and the rest 5(five) were college level and above .among 312 respondents 148(47.44%) were farmers ,44(14.13%) were

merchants, 13 were governmental employee, 25 were private employee, 17 were house wife, 26 were daily laborers, 9 were students, 17 were jobless and 13 were commercial sex workers in their occupational status. From the total 312 study subjects 155(49.68%) were married, 50(16.08%) were single, 71(22.75%) were divorced and 36(11.54%) were widowed. Detail description of socio-demographic characteristics is shown below table1.

### 3.2. Knowledge About HIV Transmission and Condom Utilization

**Table 2.** Respondents' knowledge on HIV transmission in Mokoni among patients enrolled on ART, Northern Ethiopia, 2013

Item	Yes		No	
	Frequency	%	frequency	%
HIV can be transmitted through unprotected sex with HIV/AIDS taking ARVs	303	97.12	9	2.88
Unprotected sex with infected partner taking ARVs could result in contracting HIV	286	91.8	26	8.33
People on ARVs less likely to transmitting HIV to their sexual partner during sexual intercourse	166	53.20	146	46.80

**Table 3.** Sources where ART enrolled patients get condoms in Mokoni, Northern Ethiopia, 2013.

Source	Frequency	Percentage
Health center	256	83.66
Pharmacy	4	1.30
Shops	14	4.57
Health center and pharmacy	12	3.92
Health center ,pharmacy and shop	8	2.61
Health center and shop	2	0.65
Hotels	10	3.26

Of the total 312 participants 303(91.12%) knew HIV can be transmitted through un protected sex with HIV/AIDS infected partner not taking ARV .but 9 of them didn't knew. Among 312 respondents 286(91.67%) had knowledge about unprotected sex with infected partners as contracting HIV even taking ARV, the rest 26(8.33%) hadn't knowledge about it. Only 166(53.20%) knew people on ART less likely transmitting HIV to their sexual partners during sexual intercourse ,whereas the rest 146 (46.80%) knew even though people on ART transmit HIV to their sexual partners during sexual intercourse as people who are not ART .

Among 312 participants 35(11.22%) of them had knowledge about people on ARV can't transmit the HIV virus to uninfected partners, 277(88.73%) knew even people taking ARV can transmit HIV to uninfected partner.

From a total of 312 study subjects who responds to questions that are related to condom knowledge 312(100%) knew condom. 306(98.10%) knew as condom prevent HIV, 301(96.47%) knew condom prevent STI ,306(98.10%) knew condom prevent pregnancy and 305(97.70%) knew condom reduce chance of HIV infection. all respondents knew condom couldn't be reused .out of the total respondents 274(87.82%)knew HIV can't pass through a condom, 38(12.18%) responded that HIV can pass through a condom.

### 3.3. Attitude towards Condom Utilization

From the total 312 respondents 136(43.59%) had attitudes about people on ARV tend to engage in risky sexual practice ,176(56.41%) didn't believe people on ARV tend to engage in risky sexual practice. among the total respondents 121(38.78%) agreed that because of availability of ARV people could again engage in un protected sex, 64(20.51) agreed that it was safe to engage in unprotected sex with a person taking ARV .from the total 312 respondents 275(88.14%) agreed people of their town accepted condoms. 268(85.89%) of the respondents talked to their sexual partner about condom use. among the total respondents 180(57.69%) agreed that sexual intercourse with condom as good as without a condom, the rest didn't agree . 147(47.12%) disagreed condom use reduce sexual pleasure , the rest 165(52.88%) responded that condom use can reduce sexual pleasure.

### 3.4. Practice towards Condom Utilization

Out of 312 participants 208(66.70%) had sexual partner , but 104(33.30%) hadn't sexual partner , among those who had sexual partner 174(83.60%) had only single sexual partner ,5 (five) had two sexual partner , 7(seven) had three

sexual partner and 22 had 4( four ) and above sexual partners. among 208 people who had sexual partner , 72 (34.6%) had sexual relation with their wife , 84(40.38%) with their husband ,17 with commercial sex workers and 22 with their friends as sexual partner . From a total of 312 respondents 223(71.47%) had ever used a condom .and 89(28.53%) hadn't ever used a condom. out of 223 who had ever used a condom 165(73.99%) were currently used a condom .but 58(26.01%) didn't use a condom currently. From 58 who didn't currently used a condom, 22(37.93%) were because of being uninterested, seven were due to religious reason, 22 (37.93%) were due to hadn't partner and 7 were due to need of children.

Out of 312 respondents 306 (98%) could able get a condom if they need but 6 of them couldn't able to get a condom if they need .from those 306 who could able get a condom if need, 256(83.60%) of them were get a condom from health center, 4 of them from private pharmacy 14 from shops, 12 from health center and pharmacy, 8 from health center, shops and pharmacy, 2 from health center and shops and 10 of them get from hotels.

Out of 312 respondents 306(98%) thought that condom supply was enough but 6 were not and all of them respondent thought that as the cost was fair. 249(79.8%) were confident about how to use a condom but 63(20.19%) weren't , and 250(80.12%) had ever attend in session demonstrating using a condom. from 165 who were currently use Patterns of condom use among 165 who are using condom currently d a condom 116(70.3%) were consistently used a condom the rest 49(29.69%) were not used a condom consistently .

#### 4. Discussion

In our study about 91.12% knew HIV can be transmitted through unprotected sex with HIV/AIDS infected partners not taking ART, 91.67% had knowledge about un protected sex with infected partner contracting HIV, even taking ART. This is consistent with study done in Uganda that was 86.3% and 94% respectively (10). This study finding showed that 100% of the respondents knew condom prevent HIV. This is higher than compared with a study done in South Africa which was 85% (11). This discrepancy might be due to health education about condom utilization. In this study 96.5% knew condom prevents STI, 98.1% had knowledge condom prevents pregnancy, and 97.76% knew condom reduce chance of HIV infection .This is comparable with a study done in Uganda, that was 97.7% ,100% and 97% respectively(10).

This study findings showed that 38.78% respondents agreed because of availability of ART people could again engaged in unprotected sex, which is higher than a study conducted in Addis Ababa which was 23% (7). This difference could be due to in our study 65.7% were illiterate .This study revealed that 43.59% of them tend to

engage in a risky sexual practice which was much higher than a study conducted in South Africa which was 19% (11). This might be due to high numbers of respondents were illiterate. In this study 85.9% respondent could talk to their sexual partner about condom use, 52.9% agreed condom use reduce sexual pleasure. This is consistent with a study conducted in Uganda which was 84% and 50% respectively (10).

In this study 83.6% of participants had only one sexual partner and 16.4% had multiple sexual partners. This study is almost similar with the study done in Addis Ababa that was about 90% and 10% respectively. Regarding with whom had sexual intercourse 75% with their regular sexual partner , 5% with commercial sex workers ,8% with non regular sexual partner .This study finding is almost comparable with study done in Felege Hiwot hospital that was 88.5% ,5.1% and 6.4% respectively (14). This study finding showed that 71.47% had ever used a condom. This is much higher than a study conducted in Nigeria 38% (9). This might be due to active and well integrated health information dissemination and service in the health center where we conducted the study. Only 12% of these who didn't use a condom currently were due to religious reason .This was higher than the study conducted in South Africa which was 4% (11). About 12% were because of need of having child which is much lower than the study conducted in Addis Ababa public hospitals that was 24.3% (13). In this study 98% of participants could get condom if they need. This finding is higher than a study conducted in Addis Ababa public hospital which was 87% (13). This study finding showed that 79.8% were confident about how to use a condom. This is similar with a study conducted in Uganda (79.1%) (10). regarding attending in session demonstrating using condom about 80.12% have attended. This is much higher than study conducted in Uganda which was 57.4% (10). This might be due to good coordinating health package and link group's integration with support group.

This study revealed that the majority of ART enrolled patients were females, illiterate, farmers and high number of divorced and widowed. Almost all of the respondents were knew condom. The majority of patients ART enrolled always use a condom during sexual intercourse Respondents are convinced of safety and effectiveness of condoms as prevention tool against HIV, STI and pregnancy. There is positive perception to condom use by patients on ART. There is enough supply of condoms in the health center which is given to each patient with kit aid. Significant number of participants knew that HIV can be transmitted through unprotected sex with HIV infected partners not taking ART and taking ART. Majority of respondents used a condom currently and consistently. Significant number of the respondents was well confident about using condoms and attended session demonstrating about using condoms.

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