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Sexual practices and sexual risk behaviors over the past 12 months for people living with HIV in Albania

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Abstract

In cross–sectional studies, we investigated frequency of sexual activity and risky sexual behaviors among 264 people living with HIV in Albania, aged over 15 years old. Over the past 12 months, 85.2% were involved in sexual behavior out of which 74.6% were male and 25.4% were female. 75.7% of sample was heterosexual; 13.6% bisexual; and 10.6 % homosexual. The study found that homo-bisexual committed more sex than heterosexuals respectively 89.3% and 83%. The study found significant difference in the last 12 months between: sexual orientation and the number of sexual partners; type of sexual partners; kinds of sex; safe sex; knowing your partner's HIV status; and the HIV status of the last sexual partner ($p<0.01$). In the heterosexual men prevails "1 partner" in a 72.6%; in the women prevails "1 partner" in a 44 83%; in the bisexual men prevails "1 partner" in a 32.4%, followed by "2 partner" and "3 partner" respectively 23.5%; in homosexuals prevails "2 partner" 56%.

Introduction

Public interest for the growing pandemic of the Human Immunodeficiency virus and Acquired Immunodeficiency Syndrome has been report in the middle of professional disciplines (Bass, Linsk, & Mitchell, 2007; Robiner, Parker, Ohnsong, and Strike, 1993; World Health Organization 2006). The According to World Health Organization, 2017 estimated that 36.9 million people living with HIV, at the end 2017, of whom 1.8 million were newly infected and 940.000 deaths were registered in the same year. In 2017, 21.7 million people living with HIV were receiving antiretroviral therapy globally. Based on, the nation report of HIV/AIDS until November 2017, 1090 was diagnosed cases with HIV in Albania, while projections estimate that the number of people with HIV/AIDS in Albania is 1500 (UNAIDS, SPECTRUM 2016). This is the attribute to the high stigma associated with the disease and associated risk factors such as homosexuality; unprotected sex with many partners; low degree of awareness among highly vulnerable group which reduce the voluntary testing. The HIV prevalence is less than 0.04% (population according to Census 2011). Institute of Public Health (2017), reported 881 people living within Albania, at the end of 2017, of which 81 were newly infected. The sexual way continues to predominate in 95% of cases as the main way of getting HIV; 82.6% heterosexual and 12.4% homosexual. As a consequence, the Albania has still low incidence and prevalence, the risk of an epidemic is quite significant and underlying that sexual route is main way of contracting

HIV. In 2017, 509 people living with HIV were receiving antiretroviral. There has been a consequent decrease in mortality among PLWH, improved wellbeing and subsequent increase in normal improved wellbeing and normal functioning including sexual activity. As results of increasing numbers of people living with HIV in Albania mental health counselor should await that they presumably will unexpectedly be faced with clients who present with HIV or AIDS. Additionally persons who lived with long term illnesses, such as HIV/AIDS, often present with a variety of unique problems, specially linked with their sexual life, of which counselors should be aware.

The target of HIV prevention efforts globally was broadly on people uninfected with HIV. Many HIV-infected people now live longer and healthier lives due to widespread availability of antiretroviral therapy (ART). In this way, it has become more and more important to gather information about factors associated with high-risk sexual behavior among persons with HIV infection and to develop interventions to prevent the spread of HIV to their uninfected partners.

Various studies have reveal that HIV-infected people who become conscious of their infection tend to decrease activities that would cause risk to their partners Clearly *et al*. Collis and Celum study (2001) reported a part of sexually transmitted infection additional than HIV have been well known continuously more among HIV infected persons. These infections not only are markers of unsafe sexual activity, but they also increased risk for HIV

transmission Kelly *et al* study propose that patients' enthusiasm about the efficacy of antiretroviral therapy may contribute to relaxed attitudes toward risky sex practices. Tumukunde *et al* study in Kampala Uganda found that the abstinence and use of condoms may not be enough to prevent HIV among people living with HIV who desire children, addition methods should be considers; Sarna *et al* study in Mombasa, Kenya found 45% of all participants were sexually active in the last six months. Participants receiving preventive therapy were more likely to report: > 2 partners, more unprotected sex with regular partners and more STI and 40% of all participants didn't know the HIV status of their regular partner. Chakrapani *et al* study at Chennai India discovered that safer sexual practices of permanent use of condoms were ascribe to sense of personal responsibility to protect the health of sexual partner; desire to stop acquiring of HIV virus. Issifou Yaya *et al* study in Sokode, Togo reported high prevalence of unsafe sex among people living with HIV and receiving ART therapy. Factors associated with sexual risk behaviors were non-adherence to therapy with ARV, use of drugs and alcohol, and low level of education.

Methods
Study Setting
The study was organized among adult aged over 15 years old, living with HIV/AIDS and receiving care from Outpatient Clinic in Tirana. The outpatient clinic is delivered by interdisciplinary team that cares for HIV infected adults in all country. This HIV program was established nearly 12 years ago and was based at the Infection Diseases Hospital in Tirana. HIV-infected patients are typically referred to the Outpatient Clinic after the patient is diagnosed and confirmed as HIV + from lab. At their first clinic visit, patients undergo a comprehensive assessment by team members, which includes social and medical history, physical examination, review of laboratory results, and education about HIV disease and it's transmission. The team consists of nurses, social worker, psychologist and infectious disease specialists. For patients who are candidates for initiation of antiretroviral therapy a physician discuss treatment options in relation to patient-specific factors. In terms of ongoing patient care, the doctors monitor laboratory results and other signs and symptoms to identify any adverse effects of antiretroviral drug therapy that may arise. PLWH come to the ambulatory clinic every month to obtain their treatment. The clinic serves only to people infected from HIV offering prevention, care, treatment.

Study design
This was a cross-sectional descriptive study utilizing quantitative survey methods of data collection. The sexual behavior questionnaire used for data collection was adopted with modifications, pretested, translated and back translated was used. The main domains of the study tool included socio-demographic characteristics, information on how the HIV virus is acquired, sexual identity, sexual orientation, sexual attraction, and sexual behaviors. The socio demographic details included: birthplace, place of residence, age, sex, marital status, education, employment status and income. Information on how the HIV virus is taken details

included: Time from HIV diagnosis, way of infection, how is their perception of care offered from health providers of the first 30 days of HIV diagnosis. Sexual behaviors enlisted included whether PLWH had sexual intercourse in the past 12 months and the information for their last sexual intercourse; number of sexual partners (regular and non regular), type of sex activities, condom use, knowledge about HIV status of their partner, civil status of their partner, age of their partner and if they have paid sex, in the last 12 months.

Sampling of study subjects
The subject populations are every person living with HIV virus in Albania. The target population where this survey is focused on all persons diagnosed and reported with HIV, nearby national database of the Institute of Public Health. The IPH lab is the institution that performs the final confirmation in national level for an HIV test. Described from HIV national report (2017), the total number of persons diagnosed with HIV in Albania, by 1 December 2017, is 1090 of whom 71.5% are males and 28.4% are females. The sample frame was people living with HIV/AIDS, above 15 years old. 839 is the total number of PLWH, > 15 years old in Albania. To ensure equal representation of sub-populations we use the stratified sample dividing the population in two strata with the criteria of getting/non getting antiretroviral therapy. 465 PLWH are on antiretroviral therapy and 374 PLWH are not on antiretroviral therapy. To specify the sample size we use the Sovin formula $n = N/1 + N^*$ $(e)^2$. The sample size is 264 PLWH. The first stratum of PLWH on therapy with the criteria of adherence is divided in two groups. In a random way we select the sample. The sample is made up of three groups: PLWH on ARV with good adherence (88), PLWH on ARV with low adherence (88) and PLWH non on therapy (88).

Ethical issues of the study
Informed consent is taken to all study participants'. It is explained in detail every step of the study, the reason why its conduct and the why it's important. It's discussed about the risk and the potential benefits. It is respected and protected the confidentiality and the anonymity of every participant's from the start till the final stage of the study. In this study is followed the professional codes, laws and regulations of the outpatient clinic. The instruments used in the study are approved by the department of psychology and pedagogy in University of Tirana. The consent to work with patients, involved in the study, is taken from the Infectious Diseases Hospital, Tirana Albania.

Definition of variables
Safe sexual behavior
People Living with HIV were graded as running safer sexual behavior if they systematically used a condom during every sexual act or abstained from sex in the 12 months preceding the study.

Consistent condom use
It was determined as a practice of permanently using a condom every sexual intercourse vaginal/anal in the twelve months before the study.

Abstinence

PLWH was determined as a restraining of sexual life if they reported that they did not experience any sexual act within the 12 months before the study.

Casual sexual partner

It is the person that you have sexual intercourse without having an emotional connection.

Kinds of sex activities

The sexual activity can be performed in a different manner: anal, oral, vaginal activity.

Data analysis

The data analysis was performed using the SPSS 20.0 statistical package. Kolmogorov-Smirnov test was conducted to test the distribution of continuous variables. Descriptive statistics of continuous variables are summarized as mean Categorical variables are presented as absolute frequency and percentage. Hi-square test and Fisher's test were used to compare the proportions between categorical variables. Analysis of variance (ANOVA), Kruskal-Waltis test and student t test for comparison of the averages of continuous variables were used. Multivariate logistic regression methodology has been used that controls for all possible confusions for the estimation of independent predictor Statistical significance is defined for $p \leq 0.05$.

Results

Characteristics of the study participants

The subject populations are every person living with HIV virus in Albania. The target population where this survey is focused on all persons diagnosed and reported with HIV, nearby national database of the Institute of Public Health. The IPH lab is the institution that performs the final confirmation in national level for an HIV test. Described from HIV national report (2017), the total number of persons diagnosed with HIV in Albania, by 1 December 2017, is 1090 of whom 71.5% are males and 28.4% are females. The sample frame was people living with HIV/AIDS, above 15 years old. 839 is the total number of PLWH, > 15 years old in Albania. 75.7% of sample was heterosexual of which 35% were female and 65% were male; 13.6% were bisexual of which 2.7% were female; and 10.6 % were homosexual. The mean age of homosexuals M = 33.7 (10.1) is lower compared to the age of bisexuals M = 43.2 (11.3) and heterosexuals M = 44.7 (11.4), with significant difference between them ($p<0.01$). Bisexuals prevail in the age group 45-54 (17.6%), homosexuals prevail in the age group 25-34 (29.8%) and heterosexuals in the age group 55-64 (84.1%). There is no significant difference in the place of residence (p = 0.4); education level (p = 0.2); status of employment (p = 0.07); and religious belief (p = 0.5). There is significant difference in terms of civil status, in the bisexuals dominate "divorced" 21.2% followed by "single" 17.7% while homosexuals dominate "singles" 35.5% with significant difference between them ($p<0.01$). There is significant difference if sexual activity in the last 12 months (p=0.001). The study found that homosexuals have had more sexual intercourse than heterosexuals, respectively (89.3%) and (83%).

Table 1: Demographic characteristics of participants according to sexual orientation (*hi-katror *testi χ^2)

Variables	bisexual N (%)	heterosexual N (%)	homosexual N (%)	P
gender				
female	1 (1.4)	70 (98.6)	0	<0.01
male	35 (18.1)	130 (67.4)	28 (14.5)	
Age M (SD)	43.2 (11.3) 21-63	44.7 (11.4) 18-70	33.7 (10.1) 22-60	<0.01
Age group				
16-24	3 (21.4)	7 (50)	4 (28.6)	<0.01
25-34	5 (10.6)	28 (59.6)	14 (29.8)	
35-44	10 (13.2)	60 (78.9)	6 (7.9)	
45-54	13 (17.6)	59 (79.7)	2 (2.7)	
55-64	5 (11.4)	37 (84.1)	2 (4.5)	
≥65	0	9 (100)	0	
Residence				
Rural	10 (15.9)	49 (77.8)	4 (6.3)	0.4
Urban	26 (12.9)	151 (75.1)	24 (11.9)	
Level of education				
No education	1 (20)	4 (80)	0	0.2
Elementary school	2 (9.1)	19 (86.4)	1 (4.5)	
Middle school	9 (9.7)	73 (78.5)	11 (11.8)	
High school	20 (20.8)	69 (71.9)	7 (7.3)	
University	4 (9.8)	30 (73.2)	7 (17.1)	
Postgraduate studies	0	5 (71.4)	2 (28.6)	
Civil Status				
cohabitation	1 (7.7)	11 (84.6)	1 (7.7)	<0.01
single	11 (17.7)	29 (46.8)	22 (35.5)	
Divorced	7 (21.2)	24 (72.7)	2 (6.1)	
widow	0	27 (100)	0	
Regular partner	1 (50)	1 (50)	0	
married	16 (12.6)	108 (85)	3 (2.4)	

Religion			
Atheist	1 (5.6)	13 (42.2)	4 (22.4)	
Bektashi	0	2 (100)	0	
Catholic	6 (18.2)	22 (66.7)	5 (12.5)	0.5
Muslim	20 (13.3)	118 (78.7)	12 (8)	
Orthodox	4 (14.3)	19 (67.9)	5 (17.9)	
Other	5 (15.2)	26 (78.8)	2 (6.1)	
Employment			
No	19 (16.2)	91 (77.8)	7 (6)	0.07
pension	1 (8.3)	11 (91.7)	0	
yes	16 (11.9)	98 (72.6)	21 (15.6)	
Where do you live?			
Prison	0	0	1(100)	
Hotel	0	1(100)	0	0.03
Parents house	11 (14.3)	54 (70.1)	12 (15.6)	
Rent house	7 (15.2)	30 (65.2)	9 (19.6)	
Relatives house	2 (25)	6 (75)	0	
My home	16 (12.3)	108 (83.1)	6 (4.6)	
Other	0	1(100)	0	
Monthly income			
No income	9 (15.3)	45 (76.3)	5 (8.5)	
≤50.000lek	1 (20)	4 (80)	0	
]50.000-100.000]	3 (8.8)	28 (52.4)	3 (8.8)	
]100.000-150.000]	7 (28)	16 (64)	2 (8)	
]150.000-200.000]	6 (20)	19 (63.3)	5 (16.7)	
]200.000-250.000]	3 (9.7)	26 (83.9)	2 (6.5)	
]250.000-300.000]	1 (5.3)	17 (89.5)	1 (5.3)	0.09
]300.000-350.000]	1 (10)	9 (90)	0	
]350.000-400.000]	1 (8.3)	11 (91.7)	0	
]400.000-450.000]	1 (16.7)	4 (66.7)	1 (16.7)	
]450.000-500.000]	0	6 (100)	0	
]00.000-550.000]	1 (25)	2 (50)	1 (25)	
>550.000lek	2 (8.7)	13 (56.5)	8 (34.8)	
Do you have sex in the last 12 months?			
No	2 (5.1)	34 (87.2)	3 (7.7)	0.001
Yes	34 (15.1)	166 (73.8)	25 (11.1)	
Do you have children?			
Jo	15 (16.3)	52 (56.5)	25 (27.2)	<0.01
Po	21 (12.2)	148 (86)	3 (1.7)	

Table 2: Sexual behaviors over the past 12 months according to sexual orientation

Sexual behaviors in past 12 months	response	N	%
Heterosexual	yes	166	83.0
	no	34	17.0
Homosexual	yes	25	89.3
	no	3	10.7
Bisexual	yes	34	89.3
	no	2	10.7

The overall sexual activity over the past 12 months of the sample show that there is significant difference in sexual activity in the last 12 months (p=0.001). The study found that over the past 12 months homosexuals and bisexual have had more sexual intercourse than heterosexuals, respectively 89.3% and 83%.

Table 3: Over the past 12 months, data on Sexual Behavior based on Sexual Orientation

Sexual relationship over the past 12 months	Heteroseksual	Femra	Biseksual	Homoseksual
	N (%)	N (%)	N (%)	N (%)
Number of sexual partners (*p*<0.01).				
0	14 (12.4)	18 (34.0)	4 (11.8)	2 (8.0)
1	82 (72.6)	44 (83.0)	11 (32.4)	6 (24.0)
2	17 (15.0)	4 (7.5)	8 (23.5)	14 (56.0)
3	7 (6.2)	1 (1.9)	8 (23.5)	2 (8.0)
4	5 (4.4)	0	2 (5.9)	3 (12.0)
≥5	5 (4.4)	1 (1.9)	2 (5.9)	1 (4.0)
Kinds of sexual partners (*p*<0.01).				

Regular partner	79 (69.9)	46 (86.8)	8 (23.5)	7 (28.0)
Paid partner	4 (3.5)	0	3 (8.8)	0 0.0
Casual partner	15 (13.3)	2 (3.8)	17 (50.0)	7 (28.0)
Casual +paid partner	1 (0.9)	0	2 (5.9)	1 (4.0)
regular + casual + paid	1 (0.9)	0	0	1 (4.0)
Regular +casual	9 (8.0)	0	1 (2.9)	9 (36.0)
Regular +paid	7 (6.2)	0	0	1 (4.0)
Type of sex ($p<0.01$).				
Oral	1 (0.9)	0	0	0 0.0
Vaginal + oral	22 (19.5)	0	0	0 0.0
Vaginal	72 (63.7)	35 (66.0)	0	0 0.0
Vaginal +anal +oral	21 (18.6)	9 (17.0)	0	0 0.0
Anal	0	0	12 (35.3)	4 (16.0)
Anal + oral	0	0	19 (55.9)	22 (88.0)
Safe sex ($p<0.01$).				
No	70 (61.9)	44 (83.0)	20 (58.8)	14 (56.0)
Yes	42 (37.2)	6 (11.3)	7 (20.6)	9 (36.0)
Did you know HIV status of patient? ($p<0.01$).				
No	65 (57.5)	20 (37.7)	29 (85.3)	21 (84.0)
Yes	51 (45.1)	31 (58.5)	2 (5.9)	5 (20.0)
HIV status of partner ($p<0.01$).				
hiv-	25 (22.1)	9 (17.0)	2 (5.9)	3 (12.0)
hiv+	26 (23.0)	22 (41.5)	0	2 (8.0)
unknown	65 (57.5)	20 (37.7)	29 (85.3)	21 (84.0)
Number of partners that have anal sex without condoms in the last 12 months ($p<0.01$).				
0	102 (90.3)	43 (81.1)	8 (23.5)	11 (44.0)
1	0	8 (15.1)	7 (20.6)	4 (16.0)
2	1 (0.9)	0	8 (23.5)	8 (32.0)
3	0	0	6 (17.6)	0 0.0
4	1 (0.9)	0	1 (2.9)	3 (12.0)
≥5	0	0	1 (2.9)	0 0.0
Number of partners that have vaginal or other sex without condoms in the last 12 months ($p<0.01$).				
0	41 (36.3)	6 (11.3)	8 (23.5)	6 (24.0)
1	56 (49.5)	39 (73.6)	7 (20.6)	2 (8.0)
2	9 (8.0)	4 (7.5)	6 (17.6)	12 (48.0)
3	3 (2.7)	1 (1.9)	6 (17.6)	3 (12.0)
4	5 (4.4)	0 0.0	2 (5.9)	2 (8.0)
5		0 0.0	2 (5.9)	1 (4.0)
≥5	2 (1.8)	1 (1.9)	0 0.0	0.0
Number of partners that have sex without knowing HIV status of partner ($p<0.01$).				
0	51 (45.1)	31 (58.5)	2 (5.9)	4 (16.0)
1	32 (28.3)	15 (28.3)	9 (26.5)	4 (16.0)
2	18 (15.9)	3 (5.7)	8 (23.5)	12 (48.0)
3	0	1 (1.9)	8 (23.5)	3 (12.0)
4	4 (3.5)	0 0.0	2 (5.9)	2 (8.0)
≥5	3 (2.7)	1 (1.9)	2 (5.9)	1 (4.0)

The table 3 demonstrates that has significant relationship between all the variables that measure the sexual activity over the past 12 months of the people living with HIV/AIDS according sexual orientation. Chi square test χ^2 is used to show the relationship between variables as: number of the sexual partners in the last 12 months; kinds of sexual partners; type of sex; information about use of safe sex practice; knowledge about HIV status of their partners; number of partners over the past 12 months that had anal sex without condoms; number of partners over the past 12 months that had vaginal or others sex activities without condoms according to sexual orientation.

Discussion
Two hundred sixty four (264) participants it was a sample of the study. Of these, 26.1% were females and 73.1% were males. In the study' sample prevail age group 35- 44 years old (28.8%). The mean age of the sample was 43.41 years old. From the throughout the sample: 75.7% consider themself heterosexual; 10.6% homosexual, and 13.6% bisexual. The marital status of the sample: 48.1% were married, 23.5% were single, 12.5% were divorced, 10.2% were widowed, 4.9 % were in cohabitation, and 0.8% have regular partner, but not living together. 65.2 % of the sample has children. The mean of education is 3.63. It reveals that the average of the sample has completed 8 to 12 years of school. 51.1 % of sample were employed.). It is noticed that men's average monthly income is higher than in women.The median of monthly income for the total sample is 196,401 Lek ranging from 0 to 550,000. The medianof monthly

income of women is 159,859 Lek with a rank (0- > 550,000); 209. 844 Lek with rank (0-> 550000) of the male, with significant statistical change between them (*p*<0.01) There is statistically significant difference between sexual orientation and the number of sexual partners in the last 12 months according sexual orientation (*p*<0.01). Over the past 12 months in the heterosexual men, women and bisexual man prevail "1 partner" respectively 72.6%, 83%, 32.4% and in the homosexuals man prevails "2 partner" in 56%. There is statistically significant difference between sexual orientation and kinds of sexual partners in the last 12 months (*p*<0.01). Over the past 12 months in the women and heterosexual men prevails "regular partner" respectively 86.8% and 69.9%; bisexuals men prevails "casual partner" 50%; homosexuals prevails "regular + casual partner" 36%. There is statistically significant difference in the type of sex according sexual orientation in the last 12 months (*p*<0.01). In the women and heterosexual men prevails "vaginal sex" respectively 66% and 63.7%; in the homosexual and bisexual men prevails "anal +oral sex" respectively 88% and 55.9%. There is statistically significant difference between safe sex practices and sexual orientation (*p*<0.01). The highest rate of "unprotected sex" is in women 83%, followed by heterosexuals men 61.9%, bisexuals 58.8% and homosexuals 56%. The highest rate of "sex-protected" is in the heterosexuals 37.2% and homosexuals 36%. There is statistically significant difference between sexual orientation and information about HIV status of their partner in the last 12 months (*p*<0.01). In the last 12 months women had more information about HIV status of their partners 85%; followed by bisexual men 84%.There is significant difference between HIV status of sexual partners and sexual orientation in the last 12 months (*p*<0.01). In bisexual, homosexual, and heterosexual men, the "unknown" status of the partner prevails 85.3%, 57.5%. and 37.7%. Heterosexual males have more "HIV-" partners 22.1%, followed by women 17%. Over the past 12 months, anal sex without condoms with "1 partners" prevails in bisexual and homosexual males respectively 20.6% and 16%; "> 2 partners" prevails also homosexual and bisexual males. Over the past 12 months, vaginal + other sex without condoms with "1 partners" prevails in women and heterosexual males respectively 73.6% and 49.5%; ">2 partners" prevails in homosexual and bisexual males. There is significant difference over the past 12 months between number of partners who have sex without knowing the partner's HIV status and sexual orientation (*p*<0.01), respectively 28.3% of women and heterosexual men refer to having sexual intercourse in the past 12 months with "1 partner" without knowing HIV status"; 48% of homosexual and 23.5% of bisexual refer to having sex with "2 partners" without knowing their HIV status; 35.3% of bisexual and 24% of homosexual refer to having sex with ">3 partners" without knowing their HIV status.

Conclusion

Over the past 12 months, 85.2% were involved in sexual behavior out of which 74.6% were male and 25.4% were female. Over the past 12 months ">2 sexual partners" prevails in homo/bisexual males. A "casual" and "paid" partner prevails in bisexual males. The highest rate of "unprotected sex" is in women and the highest rate of "safe sex" is in the heterosexuals and homosexuals. The women had more information about HIV status of their partners. The heterosexual males have more "HIV-" partners.

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